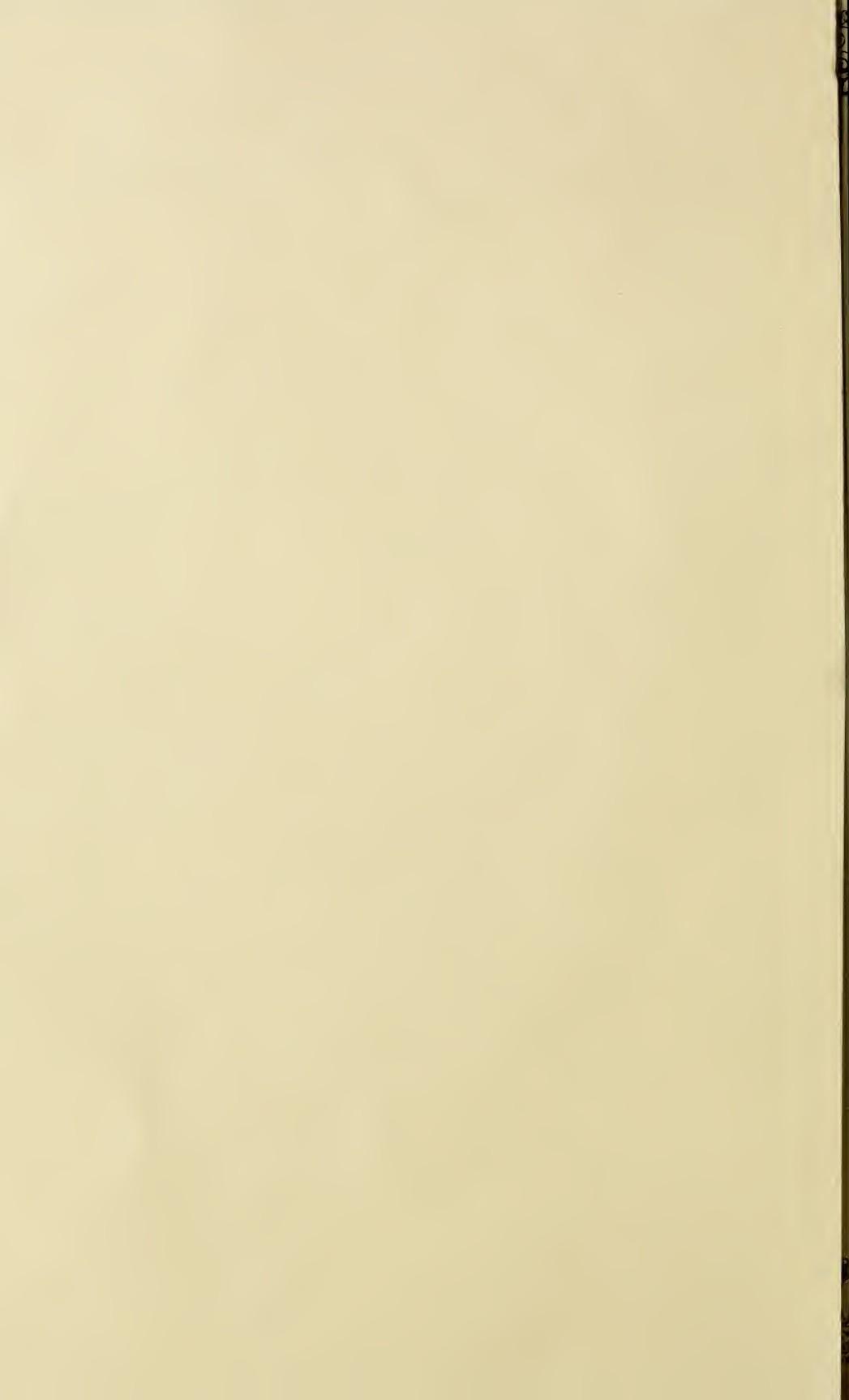


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THE APPLE AND ITS CULTIVATION.

There is everything in Maryland to make the apple crop a most desirable one, yet our orchards are not in general in a flourishing condition. In spite of our temperate climate, congenial soil over most of the State, an excellent market, the number of barrels of apples raised within our borders falls far short of what it ought to be. In very few cases, if any, has this fine fruit been made a special object of culture with us. Many persons are doubtless deterred from going into the business extensively, because of the time it is supposed that it takes an apple orchard to come into bearing. In the past a good orchard was the result of nearly half a life time of patient waiting. The trees once planted were pretty much left to themselves. Neither judicious pruning nor proper cultivation was given them. The ground selected for planting was probably some outlying field that could with the least loss be spared from other crops, and put under partial and irregular tillage. This system, which can hardly be said to exemplify the wisdom of our ancestors, has been changed of late years. The apple has become a favorite fruit, and is in constant demand. More attention has been paid to its growth, its peculiarities, its numerous varieties and their value. The market price too, with rare exceptions, has been a paying one, and where a market has been near enough to save all the profit from being eaten up by freight and handling, the yield of this fruit, considering the certainty of the crop, has well repaid the labor expended upon it. The North is at present the great centre of the apple culture.—Northwestern New York is especially renowned. We have not the statistics of the number of barrels of apples annually imported into our markets, but it furnishes an important item in coastwise commerce. If apples can thus be sent to a distant market under all the expenses incidental to such a journey, and still realize a profit, surely we with our

water and land transportation and with our home consumption so large, could compete with more distant producers on favorable terms. What we lack is a proper knowledge of apple culture. We have still to make a study of the right varieties for our soils and climate. It is a very mistaken idea to suppose, as many do, that any situation will suit for an apple orchard, and that the trees require but little care after having once been put in the ground. On the contrary, there is no fruit that repays more abundantly the requisite attention as to soil and tillage. Contrary to the opinion that is entertained by some persons, it would seem preferable in any view to have our orchards mature as early as possible, and give us as sound and as fine fruits as they are capable of producing. New varieties are being constantly developed and old ones improved, and of late it has not been hurtful but rather beneficial to the apple culturist to change at intervals the varieties he has been in the habit of growing. The apple is almost our only winter fruit, and there is no doubt as to its healthfulness, except to those few with whom all acids disagree.

As to raising the trees, it is of course always best to see that the variety is good and that the grafts have been taken from trees that are prolific bearers. To obtain this certainty the grafting must either have been done on the farm itself under competent supervision, or the young trees must be bought of a respectable dealer. The reason why it is always preferable that the farmer should grow his own trees rather than purchase them, even of growers of the highest reputation, are thus set forth in a recent valuable work entitled "The Apple Culturist."—The author says: "When a person purchases an apple tree he has no assurance that the variety will be the one he seeks, neither has he any assurance that the tree will yield one-fourth of a crop. Stocks of young trees are often produced from the poorest seeds, and the scions grafted on them will never yield well. It will take from six to ten years to

discover any error, trick or fraud. It is well, if possible, not to run this risk, and thus throw away in a great measure the labor of years. Again, it often happens that the young roots of the trees are thoroughly dried and killed before the trees are transplanted to where they are to grow. A farmer purchases, for example, a supply of apple trees to be sent one or two hundred miles. As orders at the nursery may be large, the operation of digging must commence early in the season. The trees are dug up before the frost is really out of the ground, and before they can reach their destination they are often frozen and dried alternately for two weeks." There is another objection to nursery trees arising from the fact of their being often forced into too rapid a growth by rich manuring. When transplanted into a soil of ordinary character they become stunted and lose their vigor.

After the trees have been raised and grafted, and have become of the proper size for transplanting, then comes the preparing of the ground where they are to stand permanently. The whole ground intended for the orchard should be thoroughly pulverized at least two feet unless the soil is exceptionally mellow. The holes in which the planting is made should be large, and filled in about the roots with the choicest soil, the trees will then grow in ten years to a greater maturity than in twenty under rough and uncertain culture, and will bear well from the first time of fruiting. There will also thereafter be a rich, deep soil, which will repay the labor expended on it by yielding full crops of garden products during the infancy of the orchard. It is taken for granted that the orchard will not be put to grass, for in more cases it is simply ruinous to the early maturity of the trees. A good fertile loam of mingled clay and sand is the best soil for the apple. Where these are wanting they must, if possible, be supplied. "Where the soil is deep and light, and is composed largely of sand and muck, and leaf mould, let two or three tons of clay be spread on the ground where each tree is to be planted. In the spring, as it will be then broken down by the frost let it be mingled with the light soil. On the contrary, if the soil is heavy, add sand, muck, and leaf mould, and mingle such additions thoroughly with the soil—pile on, also, gas-house lime, old and quick lime, leached, unleached, and coal ashes, chips, dirt, sawdust, street dirt, scrapings of the manure yard, tan bark, leather shavings, refuse of woolen mills, and any and all such like materials as can readily be obtained. It will pay to cart sawdust two miles to put around apple trees. * * * Good barn-yard manure is also excellent, and there is no danger of applying too much of it."

Except with those few varieties of the apple, as do not throw out wide branches, the distance at

which the trees should be planted, is about thirty-three feet. In transplanting, the following rules condensed from a standard authority should be observed:

When a tree is taken up, endeavor to take with it as many of the small roots as possible.

The tree should always be set rather less than the same depth as it stood in the nursery.

A small or moderate sized tree when transplanted will usually be a large bearing tree sooner than a large tree set out at the same time, and which is necessarily checked in growth by removal.

Manure should never be placed in contact with the roots of the tree in setting it out.

If the roots of the tree are frozen when out of the ground, and thawed again while in contact with the air, the tree will be killed. If, however, the frozen roots are well buried, filling all cavities before thawing, the tree will be uninjured.

Never set young trees in a grass field, or among wheat or other sort of grain—if any crops are suffered, they should be potatoes, carrots, turnips, or other low hoed crops. Grass may be cultivated in an orchard, if an area around each tree as far as the branches, is properly mulched with coarse manure.

The roots extend nearly as far laterally, as the height of the tree. Hence digging up the soil by cutting a circle with the spade two feet in diameter, will sever nine-tenths of the roots; and is hurtful labor.

Do not water the trees in dry weather; but keep the surface mellow, or mulch it when possible.

Warm vallies with a rich soil are more likely to cause destruction to trees through cold, than moderate hills of more exposure—the cold settling at the bottom of the vallies during the sharpest frosts.

Drain the ground intended for an orchard, if it is at all wet, and commence the work of pulverization and subsoiling at least one year before the young trees are planted.

Remember that fruit trees to bear well, require to be fed every year.

It is far better to procure trees from a poor soil, than from a soil that has been highly manured, and still better to raise your own trees.

The excavations where trees are to stand should be so hoed that the roots can readily spread to the next row without meeting with unbroken ridges of hard pan.

Beware of planting fruit trees too deep, especially in heavy soils.

Let every tree be transplanted as soon as practicable after it is taken up, and let the roots always be protected from sunshine and drying winds, until they can be buried in the soil.

When trees of any kind are purchased, it is always better to choose trees from two to three years old, that are vigorous and bushy, than to purchase large ones from four to five years old. As a rule, fruit trees that are far brought, are dearly bought.

FIELD CULTURE OF THE ONION.

It is very remarkable that so little attention has been paid in this latitude to the field culture of the onion. In the Northern States large quantities of onions are annually raised for exportation abroad, and for domestic use in other States. Thousands of barrels of onions are brought to the port of Baltimore, and large sums of money thus sent out of the State which might go into the pockets of our own people. There is no difficulty whatever in cultivating the onion, and the profit of the crop is greater than that of any other that is sent to market. It can be cultivated in our climate even better than at the North, because there, owing to the shortness of the season, it does not require to be forced, whereas here, it can be matured more slowly, and therefore at less cost for manures. There is, moreover, a general impression prevailing that the onion requires two seasons to mature. This, however, is a mistake. It is frequently grown from the seed at the North, and can also be grown of excellent size here in the same way and with much greater success because of the greater length of our seasons. Of the profit to be derived from growing the Onion as a market crop there can be no possible doubt.—It rarely brings, even at the North, less than one dollar a bushel, and oftener still it sells at a dollar and a half. In the quotation of prices in the report of the domestic markets of Baltimore, it will be found that it is selling at this time at eighty cents a peck, which is equivalent to three dollars and twenty cents a bushel. The average yield of a crop of onions at the North, taking one season with another—is four hundred bushels to the acre, and the average expense of manures and labor including the interest on the estimated value of the land, is put at two hundred and twenty-five dollars an acre. At the North it is also common to grow carrots with onions in alternate rows, and we have before us an account of the cultivation in this manner of four acres in Rhode Island, the product of which was 2,160 bushels of onions, and 1200 bushels of carrots. The onions were sold for a dollar and a half a bushel, and the carrots at thirty cents a bushel—the sum derived from this double crop being three thousand nine hundred and fifteen dollars for the onions, and three hundred and sixty dollars for the carrots—making an aggregate of four thousand two hundred and seventy-five dollars. The total expense of cultivating the four acres including interest on land, was nine hundred and fourteen dollars—thus leaving a net profit to the grower of three thousand three hundred and sixty-one dollars. This crop too, be it remarked, was grown in one season from the seed—nor is this an exceptional case. There are a number of others on

record, in which the crops were nearly as large, and the profit nearly as great.

But assuming that the onion alone is cultivated, and that the average yield is four hundred bushels to the acre. The crop to which we allude was six hundred and fifty bushels to the acre—if the four hundred bushels brought in this market only one dollar and a half a bushel and the expenses were two hundred dollars an acre, the net profit on each acre would be four hundred dollars—or take the case in its worst aspect. Put the crop at only three hundred bushels, and the expenses still at two hundred dollars, and there would still remain a profit of two hundred and fifty dollars an acre. We are not ignorant of the facts that good crops cannot be raised on poor land. The soil must be made rich—very rich—it is impossible to make it too rich, and the cultivation must be thorough—all this however we have considered in putting the expense of cultivation at two hundred dollars an acre. The cost of manure alone is therein estimated at one hundred dollars an acre, and this is quite sufficient to make even moderately poor land rich. The manure moreover should be easily soluble—nitrogenous and phosphatic—dissolved bones, Peruvian guano, or night soil, and soda, are the specialities for this particular crop. At the North they use pen manure, as the equivalent of Peruvian guano, or failing that, hog manure; whilst as the equivalent of soda, they use unleached wood ashes. But we have in our ammoniated super-phosphate of lime, where it is of good quality, and when mixed either with soda, ash, or with unleached wood ashes, as good a fertilizer as the most experienced onion grower could desire. In respect to a market, we have this advantage also, over the Northern growers. We save the cost of transportation from the interior to a port, as well as the expense of the coasting voyage to a market in another State, and all the charges for handling, and sale by middlemen. These charges in themselves amount to a profit, and this profit would enure to our growers. We speak earnestly upon this subject, because we think that here is an excellent field for enterprise, and we are sure that with proper care and attention more money can be made from four or five acres of onions, than many of our best farmers make from a hundred acres cultivated in cereals.

To ECONOMIZE MANURE.—Ordinary farm-yard manure may be made to act to a much better advantage and go much farther than usual among farmers, by finely pulverizing it, and applying to the soil late in autumn before the ground is frozen hard. The frosts of winter will then assist very materially in the assimilation of the manure with the soil, and render it much more productive than when applied in the spring, or just before the seed is sown.

AGRICULTURE AND LABOR.

An Address to the People of Maryland.

Pursuant to a resolution to that effect which was adopted by the Labor Convention which assembled at Raine's Hall, in Baltimore, in December last, the committee then appointed have issued a circular addressed to the people of Maryland "on the subject of the development of agriculture, and the encouragement of the other resources of the State by immigration." The committee was composed of Messrs. F. Raine, W. S. McPherson and George R. Dennis. The Address which these gentlemen have issued cites first of all the various laws that have been passed from time to time by the General Assembly of Maryland to encourage immigration, and go on to call attention to the fact that the necessity of more effectually promoting a movement so desirable has led to the organization of an association which is known as the "International Immigrant Union," and with which affiliated Societies to be established in the counties are hereafter to be connected for the same purpose.

The committee recommend to the citizens of Maryland the following plan, and ask for it a careful canvass :

Firstly. Encouragement to settlers, agriculturists, mechanics, laborers, capitalists, &c., from our own States and abroad.

Secondly. The formation of societies of landowners and others in each county, to ascertain the wants of such county, and to determine upon the means to supply them.

Thirdly. Such societies to co-operate with a central association in the commercial metropolis of the State, which shall include in its executive committee the presidents of all county organizations, for the purpose of taking joint steps, not only to supply the wants of each county, but also to act permanently as the agent for the promotion of the great object we have in view.

In respect to the course which would be best to pursue, the committee make the following suggestions :

The division of large tracts of land, and partitioning the same into small farms, fixing the lowest possible prices, and perhaps direct help to settlers, by forming mutual societies to erect for them houses, as has been done with beneficial results in other States, paying back contributors largely, might be considered with favor. Actual settlement would thus receive a strong impulse, and the lands be enhanced in value far beyond any immediate outlay required. Work, land and homes must be had; the wages and prices—the remuneration—be known fully, explicitly and satisfactorily to those whose immigration to Maryland we solicit.

Secondly and thirdly, the organization of societies of landowners in each county would enable us not only to give such information in the most comprehensive manner, but also would bring about united action to devise means for the furtherance of the plans suggested. The location and price of lands,

their adjacency to markets, church and school facilities, railroads, &c., would become a matter of general knowledge. We look upon the landowners as the main source to supply this information, and by recommending their organization in each county, we may expect, with good reason, provided a true spirit of progress controls their action, that the greatest good can be accomplished. Their labors would direct themselves at once to promote practical results, and greatly determine the success of our enterprise; and, in connection with this, we may be permitted to state that the organization of such societies would be of vast importance to the counties; the wants of each individual would become known, and clear-headed men would undoubtedly devise means to inaugurate reforms, such as are demanded alike by the individual as well as the State. Educational and other matters, the improvement of our roads, and many other topics, would receive the benefit of a fuller exchange of views, and react advantageously upon the prosperity of the Commonwealth.

The co-operation of the county societies with a central association (or agent,) in the commercial metropolis of our State, would enable us to spread all information—statistical, agricultural and otherwise—to the people of our own States and abroad. Each county being represented in the central organization, all action would be jointly; all steps to be taken would receive the benefit of the experience and advice of all members. The means contributed for carrying out the objects we have in view would be spread carefully and judiciously, and each citizen of our State kept constantly advised of the progress of the movement.

All these suggestions are eminently practical, and if hearty co-operation can be effected between the landowners and the society, much good would be accomplished. The first thing to be ascertained is where colonists can be located advantageously in what price they can purchase lands. This must be the State, and if agriculturists, with some means, at known beforehand, and the land must be set apart for this express purpose, at the prices named by the landowners. When this is done, there ought to be active agents in Europe with maps and printed pamphlets, who could point out the situation of the lands, thus reserved for the purchase of immigrants, and explain the qualities of the soils, the nature of the climate, the facilities for reaching a market, &c., &c. If these points are once satisfactorily settled, the International Immigrant Union will have broad ground to work upon, but if immigrants coming here are then to look about them for farms upon which to settle, or for employment either in country or in town, all the efforts of the officers of the Union will be baffled by the obstacles thrown in their way. A few colonies of immigrants settled in different parts of the State with land open for sale, at moderate prices around them, are the first necessity.—They will thus form the *nuclei* around which other immigrants will cluster, and when this is once accomplished a steady stream of immigrants will flow to those points, and the work of the association will be comparatively easy.

Our Agricultural Calendar.

FARM WORK FOR APRIL.

We have now reached the busiest month of all the year, if we except that of the harvest month.—But for the importance of its operations, April is second to none. We rarely, in this latitude, and with the later springs, to which of recent years we have been accustomed, can get the ground in order for oats before March closes. But even when this is the case, and the work is thus well pushed forward, April must necessarily be a busy month. The stall feeding of cattle has to be continued, although they may, in good seasons, get a bite of fresh grass after the 22d of the month. But this only renders their dry provender the less acceptable, and consequently March and April are the most trying months of the year for cattle. There is also in many cases grass seeding to be done in April. Fields intended to be mowed have to be cleared of stones, and harrowed and top-dressed where the grass is thin or the soil hide bound. In some cases orchards are still to be planted, though this work would be late and of doubtful propriety, unless undertaken early in the month. Where also ornamental trees and shrubs are to be set out for the decoration of the homestead, and when judiciously done nothing pays better, the operation may be carried out, if the spring weather comes on slowly until the 10th of the month. The poultry also now claims extra attention, and, in short, the cares of the month are multifarious, and happy are they who can get over them successfully and in time to enter upon the operations that are to follow. We suggest the following as the ordinary work of the month :

Seeding of Oats.

In forward seasons oats are usually planted in March. We can scarcely hope that this work this spring was gotten through with last month. If this should prove to be the case, set to work at once and push forward the seeding as early as possible. For suggestions as to soil and preparation of this crop, we refer to the *Farmer* of last month.

Sowing Clover Seed.

Clover seed should also have been sown last month or even earlier if seeded on the snow. But this matter is often delayed from various causes, and it is not yet too late to take it in hand. But it must be done quickly, either on the winter grain or with oats or barley. Do not sow less at this time than a peck of seed to the acre. In winter grain, harrow lightly and follow with the roller. On oats or barley, sow after seeding the grain and lightly cross-harrow and roll.

Barley.

The barley crop, where it can be grown successfully, pays well. In this latitude, from various causes, the seeding of barley has fallen into disuse, whilst the demand for it has immensely increased. Indeed it must be confessed that the northern barley is best for malting purposes, and as a crop more certain than with us. Barley is hardy, will stand a drouth better than most crops, and is subject to none of the diseases which are common to wheat. With us, however, the yield is generally light as compared with that of barley grown farther north, and when ripe is somewhat difficult to harvest, because of the brittleness of the heads. In threshing also there is sometimes trouble in getting rid of the haulm. Nevertheless, in a favorable season, and in soil rich and adapted to its growth, barley will yield a profitable return, and we should be glad to see its cultivation more generally extended among us. It loves a light, loamy soil, and if the latter needs assistance, we should recommend either of the following mixtures as sufficient for each acre put under crop :

No. 1.—10 two-horse loads of marsh mud, or woods' earth; 5 two-horse loads of stable manure; 10 bushels of wood ashes. Compost the above for two weeks or until it ferments. Then mix together, spread broadcast and plough under.

No. 2.—200 pounds of ammoniated phosphate, adding thereto about 10 pounds of potash. Spread and plough in.

No. 3.—10 bushels of wood ashes; 10 bushels of crushed bones; 2 bushels of salt; 5 two-horse loads of manure; 1 bushel of plaster. Put in a heap.—Let it ferment. Break down the heap after fermentation and plough in.

Quantity of Barley to the Acre—Grass Seed.—Sow two bushels of barley seed to the acre—harrow and cross-harrow. Now sow one peck of clover seed and 1 bushel of orchard grass, seeding these separately; bush in and roll.

Spring Wheat.

We do not recommend spring wheat; but wherever its cultivation is thought to be desirable, it should be gotten into the ground as early as possible. Sow two bushels of seed to the acre, and clover down.

Hide-Bound Meadows and Pastures.

Run a sharp harrow over such meadows and pastures as are hide-bound, previously top-dressing each acre with a mixture composed of 10 bushels of bone dust, 10 bushels of wood ashes, 1 bushel of salt and 1 of plaster.

Hauling Out Manure.

Manure intended for the corn crop should now be hauled out if the work has not already been done,

Potatoes.

Early potatoes should have been planted last month. It is not, however, too late yet. For preparation of soil and culture, see *Farmer* of last month.

Compost for Corn in the Hill.

A good mixture to apply to corn in the hill may be formed of 10 bushels of well rotted manure, 1 bushel of plaster, and 5 bushels of finely ground or dissolved bones, thoroughly mixed together, and a double handfull applied to each hill at the time of planting. Ammoniated phosphate of lime with a little potash added will answer the same purpose.

Sugar Beet and Mangold Wurtzel.

The best soil for these excellent roots for stock feeding will be found to be a rich loam inclining to clay, but not too tenacious. It should be moist and comparatively cool rather than dry and warm, and if not in good condition should be enriched by applying to each acre two hundred and fifty pounds of ammoniated phosphate of lime mixed with five bushels of refuse salt. In growing these crops, salt is peculiarly efficacious, whereas in growing the sugar beet and field crops of parsnips and carrots, salt exerts no appreciable effect.

Preparation of the Soil.—Plough deeply, and, if possible, follow in the same furrow with the sub-soil plough, loosening but not lifting the soil.—Next harrow and cross-harrow until the soil is reduced to a fine tilth. When this is done lay off the drills from 27 to 30 inches apart and 1 inch in depth. Drop the seed thinly along the drills, cover with the back of a rake, and finally roll all smooth. Another and a very good plan is to throw the land devoted to these crops into ridges three feet apart, flatten down the sharp crest of the ridges and run the drill along the centre of each.

After Culture.—When the plants are about an inch high dust them with a mixture of soot and plaster whilst the dew is on them. As soon as they reach the height of four inches, thin them out so as to stand twelve inches apart in the rows. Fill up vacant spaces with the surplus plants. Ten days afterwards commence running the cultivator between the rows, and be careful to keep the soil light and free of weeds.

Quantity of Seed to the Acre.—Three pounds of seed to the acre is about the proper quantity. Before seeding soak the seed in lukewarm water forty-eight hours, to give it a start, taking care that the soil is not too dry at the time of planting.

Time of Seeding.—As early in April as possible.

Parsnips, Carrots.

Soil.—Select a fine, deep, sandy loam.

Preparation.—The same as for beets and mangold wurtzel.

Quantity of Seed to the Acre.—Sow two pounds of seed to the acre.

After Culture.—The same as for beets.

Time of Seeding.—The earlier in April the better.

Add Sand to Your Garden-Soil.

A correspondent in Yates county, New York, writes the *Germantown Telegraph*, as follows:

The natural soil of a large portion of the American gardens could be improved and made to yield heavier crops by an admission of sand. In many sections where clayey soils prevail, gardens thus treated would be rendered more friable and could be worked earlier in the spring. Sand, to the depth of two or three inches, spread over the surface and gradually intermixed by cultivation, would in many instances effect a great improvement. One of the important features which this mode of treatment possesses, is the permanent character of the improvement.

When fertilizers are merely added to the soil, it gradually and in a few years loses its richness as the added elements disappears; but sand applied artificially does not disappear, but remains for ages. Many garden-soils that are naturally light, sandy, or gravelly, frequently do not possess sufficient strength to retain for any length of time the manure applied to them; hence, an application of heavy loam will be found beneficial in more than one point of view. At the present season of year when labor is plenty and cheap and teams are unemployed, is the proper time to draw and apply sand or loam, as your knowledge of the character of the garden soil will dictate.

In clay regions, beds of sand may be found within a reasonable distance, and should you be required to pay twenty-five cents per load, it will prove a profitable investment. Sand should compose one-fifth part of the soil of flower-beds.

THE BALTIMORE OYSTER INDUSTRY.—In no country in the world is the oyster so popular an article of food as in ours; and our large inland States and Territories are populated with men of like passions with ourselves of the seaboard States. What wonder, then, that the packing of this most nutritious of shell fish is a large and important industry, indeed one of the largest, in Baltimore? The oyster beds are chiefly in the Chesapeake Bay and its tributaries, and the annual crop is about 25,000,000 bushels, taken from beds covering 3,000 acres.—The capital employed in the canning and preserving trade is estimated at \$10,000,000; and the oysters dredged, canned and packed, are sufficient in quantity to feed 20,000 persons.

Garden Work for April.

The work in the garden for the month of April, is as follows:

Sowing Cabbage Seed.—If cabbage plants have not been forwarded in a hot bed, select now a border having a southern exposure and well protected in the rear against cold winds. Manure the plot well, with the richest thoroughly rotted manure. Dig the plot over completely and rake all fine—now sow in drills, cabbage seeds of such varieties as may be preferred, for the purpose of succeeding the earlier cabbage plants of which we shall speak presently. When the plants come up water them in dry weather of an evening, and if they are troubled with the fly, give them a sprinkling of flour of sulphur, or a dusting of soot, if sulphur is not to be had.

Setting out Cabbage plants.—Plants which have been raised in a hot-bed may now be set out. If none have been so raised at home, they can be had probably of others better situated, or more thoughtful. Assuming that such plants are obtained, the soil must be made very rich to grow good cabbages. The cabbage is a gross feeder, and thrives vigorously on highly nitrogenized food. Strong concentrated manures are therefore those which are best adapted to the growth of cabbage. Dig the ground over carefully—it should be deep and of a loamy texture, and rather moist than dry—rake all fine, and choosing, if possible, a moist or cloudy day; set out the plants in rows running north and south, three feet by two and a half feet apart. If, however, at the time of planting, or subsequently, the weather should prove dry, water the plants every evening after sunset, until rain occurs.

Siberian Kale.—Prepare a bed early in the winter, and sow the seed of Siberian kale for sprouts during the summer. A bed of twenty feet square, if well manured, will give sufficient kale for a large family.

Early Peas.—Continue to drill in a few rows of peas at intervals of ten days, to secure a continuous supply.

Beans.—Plant dwarf beans, and follow up the planting at intervals of ten days.

Lettuce.—Plant out lettuce plants from the cold frames for heading, and sow lettuce seed every ten days for a further supply.

Radishes.—Sow radish seed at intervals of a week throughout the month.

Spinach.—Drill in a few rows of spinach seed.

Carrots and Parsnips.—Sow carrots and parsnips for winter supply. For mode of culture see Garden Work in the March number of the *Farmer*.

Beets.—Drill in a few rows of beets for domestic

use. For mode of culture see Farm Work in the present number.

Sowing Onion Seed.—Onions of good size may be grown the same season from seed, if the latter be sown in rich and well prepared ground during the early part of April.

Celery.—If the celery plants have been raised in a hot-bed, they may now be pricked out into a nursery bed, where they may remain at distances of three inches apart for the space of five weeks. After transplanting they will require frequent watering

Sowing Celery Seed.—Prepare a bed about the middle of the month, and sow celery seed.

Salsify, or Vegetable Oyster.—Drill as many rows as may be needed of this excellent and valuable root. The soil best suited to its culture is a sandy loam. It should be rich, deeply dug, and completely pulverized. Make the drills ten inches apart, and a half inch deep. Scatter the seed freely, as many will not germinate; cover it with the back of the rake and press down firmly. The after culture is precisely the same as that required for carrots, parsnips and beets.

Parsley, Thyme, Sage, &c.—The seed of all these herbs may be sown during the early part of this month.

Rhubarb or Pie Plant.—Prepare a border having a southern exposure. Make the soil fine and rich, and sow the seed of the rhubarb or pie plant.

Early Potatoes.—The planting of early potatoes cannot be deferred to advantage later than the first week in April. It should have taken place earlier.

Small Salading.—Sow seeds of small salading at intervals of a week throughout the month.

Nasturtiums.—Drill in nasturtium seeds for pickling—they are an excellent substitute for capers.

Red Peppers.—Early in the month prepare a bed for red peppers, and sow the seed.

Tomatoes and Egg Plants.—These plants should be forwarded in a hot bed, and for an early supply must be derived from that source. For later use prepare a warm border and drill in a few rows for seed.

Melons.—Towards the close of the month prepare the hills for the reception of melon seed; a bushel of well rotted manure—horse manure is best—will be required for each hill, if fine melons are to be produced where the ground is poor. The soil best adapted to melons, is a light loam with a large admixture of sand. The distance of the hills apart should be six feet.

Strawberry Beds.—Keep these beds clean of weeds; water them frequently after sunset, during dry weather; with this precaution the plants may be safely and advantageously watered whenever in

blossom. The best top dressing for strawberries is woods' earth—none other is equal to it.

Shrubby.—All kinds of shrubbery may be planted out during the early part of the month. Towards the close of the month for evergreens is considered by many to be the best time.

Grape Vines.—In this latitude, and in ordinary seasons, grape vines may still be planted out.

SALTS OF POTASH.

MARYLAND FERTILIZING CO.
OFFICE, NO. 58 EXCHANGE PLACE.
Baltimore, March 17th, 1871.

To the Editors of the Maryland Farmer:

The use and adaptation of German Salts of Potash for agricultural purposes is now attracting the notice and enquiry of farmers, and for a year past scarcely an agricultural paper that does not contain some enquiry on the subject as to the cost, mode of application, and result on crops.

Being the first to use those Salts in the composition of our fertilizers, I have had a better opportunity of knowing their value than others who have only imported and used them after our formula was discovered, and as there appears to be a disposition on the part of farmers to use them, it is better that they should do so intelligently.

The chemical works at Stassfurt, chiefly owned and worked by the Prussian government, manufacture five or six different qualities each of Sulphate and Muriate of Potash, ranging from twenty-four to eighty-five per cent.,—the Muriate is supposed to be best adapted for agricultural use. They are sold at the works on the basis of eighty per cent., and the commercial value is more or less than the fixed price, as the quality may rise or fall above or below eighty per cent., making due allowance for the handling and transportation of the lower qualities incident to their increased bulk, thus—the value of one ton, containing twenty-five per cent. Muriate of Potash, is only one-third the value of a ton containing seventy-five per cent., and the cost of handling the other two-thirds which contain but little agricultural value. The lower qualities are generally imported for chemical manufactures, where the Magnesia and other ingredients, useless in agriculture, can be made available for other purposes.

The present market value of Muriate of Potash is three and three-fourths cents per pound for eighty per cent. If the purchaser then can ascertain the quality of the article offered him, he can readily ascertain what he ought to pay for it.

This he can easily do if he will take the trouble—every invoice shipped into this country is accompanied by a certificate of the chemical analysis, giving the percentage of Potash, with the marks and numbers of the packages forming the invoice,

which the purchaser has the right of demanding to see.

The better class of manufacturers of fertilizers use as near the eighty per cent. grade as they can get; of which one hundred to a hundred and twenty-five pounds is deemed sufficient in a ton—to obtain the same result with the lower grades would shut out two or three hundred pounds of Super-phosphate, which after all, is the cream of fertilizers.

The agricultural value and mode of application, is however of more importance to the farmer than its commercial value. On good clay soils, mica, rotten rock, or granite soils, it has no value sufficient to compensate for the loss of the Super-phosphate which it displaces, with the exception of tobacco, which requires more Potash than the soil generally affords. On light sandy, gravel or humus soils, it is invaluable, maturing the crop earlier, and enabling it to resist drought. When thoroughly combined, as it should always be, with a good Super-phosphate, I have not found the dry mixtures of Bone, Potash, and Peruvian Guano, although thoroughly incorporated by being ground together, to produce results commensurate to their cost.

Very respectfully,

LAWRENCE SANGSTON.

How to Utilize Bones.

A correspondent in the *Country Gentleman*, asks the following question :

"Can whole bones be dissolved and worked down by being mixed with unleached wood ashes, and whether in this condition they will be good as a fertilizer. Will you allow me to give you my plan for making one of the very best fertilizers I have ever used, either in the hill or otherwise? And here let me state that I am as careful in looking up and taking care of the bones about the farm as the rag-gatherer of the cities is in picking up and caring for the rags, and when I have bones in sufficient quantity I treat them as follows: Take a water tight box or cask of a suitable size, and in the bottom put a layer of ashes, say three inches in depth, then on this a layer of bones, and so on alternately until the cask is nearly or quite full, the last layer of bones being well covered with ashes. I then have my family pour upon this, all the urine from the house every day, and on washing days pour on a quantity of the strong soap-suds.

In a few months this can be taken out with a shovel all dissolved, except it may be the large enameled joint bones, which may have to be broken and put through another sweat in the like manner. It is understood that the ashes *must* be good hard wood ashes, *unleached*, or the job will prove a failure."

NOTES AND COMMENTARIES.

BY PATUXENT PLANTER.

A dog tax for the protection of sheep is what is expected and demanded by our sheep breeders. It is gratifying to find in the laws passed at the last session that our Legislators made one step forward in this matter. They did, after considerable lobbying and coaxing, pass a law (but then only for one county,) for the protection of *rabbits* in Prince George's. Since which time the canies have increased so fast and grown so independent under the protection of the statute, like another enfranchised race, that they take great liberties and bark the young fruit trees and shrubs, destroy gardens, and dare the owners to touch them, as they are under the protection of the majesty of the law. Having taken this step, and no political revolution following, the next Legislature it is hoped will move another step and protect that animal the *English Encyclopedia* describes as "remarkable for its harmlessness, timidity and usefulness. Its wool is used for clothing and its flesh for food." Hon. George W. Wilson, editor of *Marlboro' Gazette*, and the efficient, independent and popular Senator from Prince George's, has announced that he will vote for a law protecting sheep against dogs. That is one, and I hope every representative in the next Assembly will make up his mind to the importance of such a law to the whole State. I certainly "shall fight on this line all summer," and endeavor to raise an army of sheep-growers, so as to be strong enough to carry the State House next winter "by storm."

SAINT-FOIN, OR ST. FOIN.

Is highly commended by Sir John Sinclair in his "Code of Agriculture," written eighty years ago. He says it is a great improver of poor land, and on such land would produce 1 to 2 tons per acre of hay superior to any meadow hay then grown, and outselling other hay by 1 to 1½ guineas a ton. It ought to be sown 3 to 4 bushels of seed per acre, very early in spring, on well prepared, clean land, with or without grain, but best with white clover. It delights in light, sandy, gravelly, dry land. Yields heavy crops for seven or eight years, and longer if manured. It gives a good pasture after being mowed for hay. The hay is eaten by stock freely and is very fattening. Care must be taken to cover the seed when sown, but not deep. The hay is made easier than most hay, "and is best when put up so green as to take on a considerable degree of heat," says an American writer of 1818. I tried it one year, but it did not come up. I presume the seed was too old. It is said the seed is hard to vegetate if the season is dry, and the seed must be fresh.—Would it not be well for our Agricultural Depart-

ment to order some for distribution, and have it tried in this section and in the South? It stands hot suns and droughts. Has it ever been successfully tried? Are there any objections to it? I have never seen anything concerning it in our late agricultural books or journals. Sinclair seems to rank it as more valuable and useful than lucerne or any of the grasses for hay or general culture. I deem it worth experimenting with.

EVERGREENS.

It is a matter of surprise to me that persons do not more generally adorn their grounds around the homesteads with evergreens; they are so cheerful in winter, so useful in breaking the force of high winds and resisting the sweep of the storms; are so varied in habit, form and color of foliage, and so grand in snows, but wonderfully more brilliant and beautiful when covered with icicles in a bright sunshine. This is the season and next month to plant them successfully. Those who enjoyed their beauty the past winter need no other inducement to plant many of them now. Several bright days last winter, when all nature was wrapt in its snowy mantle, and silvered over with her diamonds—frozen rain-drops—that far out sparkled the dew-drops when reflecting the earliest beams of a warm June sun, I gazed with rapture upon the drooping limbs of the White Pines, Spruces, Firs, Hemlock, Juniper, Arbor Vitæ, Cedars, Barberry and others of the evergreen class. I discovered, I thought, more beauty in these shrubs and trees, that were like little mounds or colossal columns covered with emeralds under the purest crystal, lighted up and reflecting in a thousand hues the rays from the great lamp of day hung high in the Heavens by an all-wise Creator to give light to all His wonderful and mysterious works, than in the various beautiful deciduous trees which wear their garniture only for a season. It is certain, the older we grow the more we admire evergreens. Is it because our taste is more perfected, or that we more naturally turn our contemplation on lovely types of immortality, and love constancy rather than change? Those who are young and are now improving their homes by planting ornamental and shade trees, will, when they grow old, regret it, if now they do not plant several of the best evergreens, to become in future years "things of beauty and joys forever." In planting, there are some that should be placed in situations where they can have plenty of room.—The Hemlock, standing away from being crowded by other trees, growing with its lower limbs touching the ground and rising in pyramidal form 40 to 60 feet, is strikingly beautiful in winter and in spring still more so, as its new growth contrasts its pale yellowish green with the darker color of the old leaves.

Immigration.

If intelligent agents are sent abroad, whose hearts are in the matter, and will impress upon the minds of the denizens of over-populated Europe, particularly where the climate is rigorous with cold unproductive soil except at high cost for fertilizers, that here wages were high, climate warm and salubrious, soil naturally rich, easy of culture, little labor required to gain a plentiful subsistence, thousands of worthy laborers would be induced to emigrate. Let them learn too that lands are everywhere cheap, according to their nearness to market and other advantages, and that they can be bought in fee-simple on a long credit for most of the purchase money, and many with their families would come over and secure permanent homes for themselves and their children. We want mechanics, shepherds, herdsmen, gardeners, grooms, ditchers as much or more than common laborers. To such wages are four times as high as in Europe. From what I have read and heard of Chinese labor, and one instance I have seen, I cannot but think they would suit this section. We are hard put to it to get good house servants, maids, waiters, milkmen or women, and cooks especially; rough hands are almost plenty, such as they are, but the newly enfranchised seem to think it is below their dignity to be house-servants or suffer the females to do menial service. The Chinaman will do exactly as he is told, without variation. He is a cook, waiter, chamberman or maid. They all wash and iron well, are docile, industrious and easily governed. Where they have been tried in the North it would seem they give great satisfaction. They can be had easily through an agent in San Francisco, whose card is in the *Country Gentleman*, and who would do well to insert it in the *Maryland Farmer* and other papers in this region of country.

Plowman.

The communication of my old friend on "making, repairing and oiling harness," etc., in the February No. is eminently useful and practical as well as seasonable. Such hints and recipes are of great value to all farmers, especially to the young. If they were generally followed, and the inclement days were spent in such necessary work instead of in idleness or worse, thousands of dollars would be saved in the farming community each year. At a trifling cost, and little labor, everything would look better and brighter on a farm, and those who use the gear and utensils would take better care of them seeing they were mended and painted and put in good order. Inattention to these small matters is the leak where the profits are run out and lost.

Mohair Goats.

Mr. Eutychides, a native of Angora, now a citizen of this State, has imported largely of these

valuable animals. I do not see his advertisement in your paper or any other paper*. I presume therefore he does not sell these goats. It would be interesting to the readers of the *Maryland Farmer*, I am sure if Mr. E. would give some account of them. The cost, habits, number of young they have, and how often they have young; longevity, size, fitness for food, pounds of hair they yield and price of same, where sold, etc. Are they easily kept in bounds, or, like other goats, destructive to gardens, fruit trees, etc. If, as it is said, the hair will readily sell for an average of \$4 to \$6 per goat, they must be worthy the attention of our farmers, especially those who cannot keep sheep on account of dogs.

Flower Pots.

Where are they to be had? is a question often asked by my fair friends. Why do not the makers of them advertise in the agricultural journals?—The manufacture of flower-pots must be an immense business, as millions are sold during a year. It really is incredible what a number of plants are potted and sold in the United States. One establishment in New York sell annually 300,000 verbenas alone.

Home Made Super-phosphate of Lime.

A correspondent in the *Country Gentleman*, writes: To make super-phosphate of lime, I take 500 pounds of bone and 175 of vitrol. My bones I take to a pine block and cut them up small. (They don't fly so much when I use pine.) I put them in a pile and let them heat and dry. Then I take a large flagstone and put a frame around it. Then get a boulder with a flat bottom, fasten a ring to it, have a rope and pole, and let them work like a well sweep. The frame around the flag keeps the bones from flying off when the stone strikes them. I put my bones into a large kettle with twelve pails of water, and boil them six hours. I have a large box made of plank and put my bones into it and then the vitriol. I keep them well stirred. When they are hot, dry off with dry earth. I don't dry with ashes—they are not good to mix with phosphate. I sell 2,000 bushels a year. A glass company takes almost all my dried ashes at my place, paying 25 cents a bushel, rounding measure.

POTASH SALTS.—A deposit of potash salts has just been discovered in Churchill County, Nevada.—They not only furnish the purest potash, but the lye therefrom is available for the manufacture of bromine.

* Our correspondent will find Mr. Eutychide's advertisement in the March and April numbers of the "*Farmer*."

For the Maryland Farmer.

TETHERING CATTLE.

In the March number of the *Maryland Farmer*, PLOWMAN gives his theory about tethering out cattle, with an extract from Loudon. I will give a mode I have practiced, also the same practiced by my neighbors, although the practice is only tried on a limited scale after haying when pasture feed was short, or we wished to give some stock an extra "bite" on the aftermath, or our mowing. The same was communicated to, and published in, the *Country Gentleman*, September 30th, 1869, by W. W. White. Instead of copying verbatim, I will reproduce somewhat varied.

Horned cattle and horses, are the only animals I have had experience in tethering out; these should not be tethered with a rope, from the liability to the rope twisting, and other accidents, but always use a light chain with two swivels, and a ring at each end; one ring about three inches in diameter, for a pin to go through to be driven into the ground, the other an inch and a half, or thereabouts, to buckle a short strap into, to attach to the creature tethered. To tether out a horned animal, procure a piece of a tug strap of any old harness, of double thickness sewed together, four to six inches long, cut a hole in each end, one to slip on the tip of the horn, the other to buckle the short strap through to attach to the chain. Remove the knob, or "button," from the horn and slip on the thick strap—the hole should be smooth, and of size to turn on the horn freely, and yet not go over the button—screw on the button, and attach the chain by the small strap to the other end of the piece on the creature's horn. Make, from some hard tough wood, a tethering pin with a head, over which the ring will not pass, eighteen inches long; pass this through the ring, and drive it into the ground, and the animal is fast, and after a short experience, there is no liability of accidents; if the chain gets around the leg or foot, its weight will cause it to drop off, the swivels prevent twisting up; and the animal, being tied at the tip of the horn will not pull to get loose, and will most generally keep the chain from interfering with the feet; the piece on the horn, as also the ring on the pin, turn so that no winding up is possible.

The tethering ground should be free of trees, stumps, etc. Commence at one side and fasten the cattle, and as the feed is eaten off remove the pin a few feet in a line, and only move as the grass is fed as desired; the cattle should be regularly watered, as needful, twice a day. Instead of wandering up and down, they eat, lie down, ruminate, assimilate and grow fat, according as the feed may be good and the attendance regular.

Horses are tethered by attaching the chain to either one of the forward or hind feet, a broad flexible strap is fastened around above the joint, above the hoof to which the narrow strap is made fast to buckle into the ring of the chain. Cattle or horses tethered out need looking after frequently till they become accustomed to the "situation," after which there is as little danger of accident as when in the pasture. In over twenty years of experience and observation, on the before mentioned scale, I have never known of a serious accident where the stock was tethered with a chain, but where fastened with a rope I have known of instances where if the rope had not given away or the animal had been attended to immediately, results would have proved serious in a short time.

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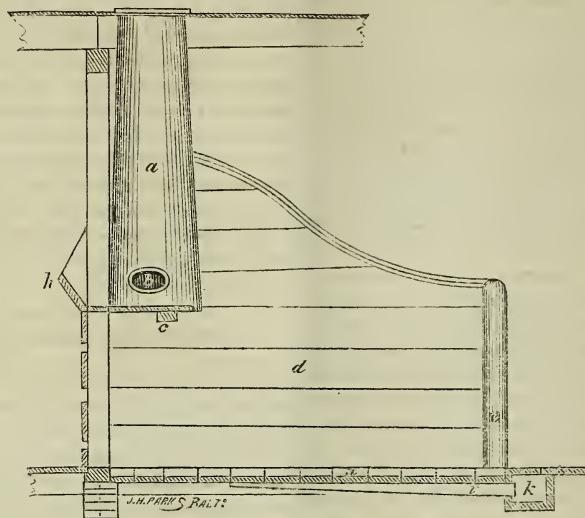
CURING RED CLOVER FOR HAY.

It is well known that curing clover hay properly is a hard matter. Having had some experience that way I will give it for the benefit of others. My first experiment was drying as well as could be without damage in the field, and on bringing to the mow to scatter air-slacked lime very liberally through it. The lime disappeared in the curing. The hay was quite dark but very palatable for cattle and sheep. I considered it successful, but wanted it to come out bright, and tried the following plan the next year, which I considered much the better; it has, however, this disadvantage—it requires much room and is rather slow for western farmers: — My barn-loft was 30 by 45 feet, with about a ton of old hay in one corner. I cut about an acre of clover one afternoon, and next day spread it over the loft and turned it the next day. The third day, if not very damp, it will do to bulk, after this manner: Lay over that portion of the barn you wish for clover a loose layer of about eighteen inches in thickness, and then a thin layer of old hay, and another layer of clover about the same thickness. I did not pack any for a week, and an acre about every third day. More barn-room would allow faster work. I had three acres of very strong clover and used the ton of old hay between. It came out in the winter fresh and green, and when fed to milch cows, showed very favorable results. Even if slow, I think the quality of the hay will pay for the trouble, especially if fed to cows or sheep.—*Correspondent Germantown Telegraph.*

ASPARAGUS FROM SEED.—The *Gardener's Monthly* says: "It has been argued that asparagus will not come true from seed, but, like rhubarb, it can be propagated true only by division of the roots. There is no reason why varieties of asparagus may not do as well from seed as peas or beans."

WILKINSON'S IMPROVEMENT IN HORSE STALLS.

Fig. 1.



Side Elevation of Stall.

In Figure 1, a side elevation of a Stall, *a* shows the *hay-tube*, which is made of sheet iron, and extends from the tie rail to the top of the hay-loft floor; *b* shows an *opening* through which the horse draws the hay, and there is a corresponding opening on the opposite side, for the adjoining horse; *c* shows a section of the *tie-rail*; *d* shows the *Stall Partition*; *e* the *rear Stall post*; *f* the *slabber-board*, which prevents the waste of feed, by the horse dropping it into the feeding passage in front of the line of stalls; *g* the *stall floor*, which slopes from each side to the centre of the stall, the objects of which are to enable the horse to lie in the stall as he does naturally, in the pasture, with the back up the grade or slope; also to provide lateral obliquity in the surface of the floor of the stall, for the purpose of draining the urine directly into the urine-gutter, under the floor; *h* the *urine-gutter* under the stall floor, which is six feet in length, and has a slope in it of five inches, which conveys the urine to the common gutter under the floor, in the rear of the line of stalls; *k* is the *common gutter* beneath the floor, with a moveable cover, which provides for conveniently cleaning said gutter with a shovel, when required.

In figure 2, *a* shows the *hay-tube* from which two horses feed; *b* an opening 6 by 9 inches through which the horse feeds; *c* the *iron manger*, which is hinged to the front stall post, that it may be swung into the feeding-passage in supplying feed, where the horse cannot molest the groom while he is preparing the forage; *d* the *rear stall-post*, four feet in height, and 6 inches in diameter; *e* the *stall floor*, sloping one inch from side to centre; *g* the *cast iron slot-cover*, which covers one half the length of the slot in the centre of the stall-floor. The rear portion is covered in a stall in which a horse is kept, and the opposite end for the mare; the cover is three feet in length, or one-half the length of the slot; *h* the *iron gutter* under the slot; — the gutter is made of galvanized sheet iron, and is six feet in length, one and one-half inches in depth at the end nearest the manger, and five and a half inches in depth at the end where it discharges into the common gutter; *k* in figure 1; *i* the slot in the centre of stall floor, it being a half-inch in width, and six feet in length.

The floor planks lie with their length across the stall, and are cut in the centre, and laid so as to leave an opening of half inch between the ends, called the slot. The planks are cut obliquely, so that the underside of the slot is one inch in width; *j* the *slabber-board*; *k* the ceiling of the front of the stall, under the manger, which is so placed as to leave openings between the boards, to provide for a cir-

culation of air in the stall when the horse is laying; *m* the *platform*, covering the space usually occupied by the box manger, so that all feed dropped from the mouth of the horse, while he is eating, may be gathered up, and may not be wasted.

In figure 3, (the plan of a stall): *a*, the bottom of the *hay-tube*, which is latticed so that all sand and filth will fall through to the floor; *b*, the opening through which the horses feed; *c*, the *iron-hinged manger*; *d*, the *rear stall-posts*; *e*, the *floor*; *g*, the *slot-cover* as used for the horse; *h*, the *slabber-board*; *i*, the *slot* in the *floor*; *k*, the *moveable plank cover* of gutter.

This cover is cut in sections at each stall-post, and is supplied with a ring and staple, for convenience in removing it. The length of the stall is nine feet, the width five feet, the height at the rear, four feet, and that at the front of stall partition, seven feet.

I claim numerous advantages in my stall arrangement for the horse, which it will be my purpose to describe somewhat in detail.

In the use of the close floor of wood, earth or other material, with a slope to the rear, the effect is to convey to the rear of the stalls the urine not absorbed by the absorbent bedding used, from which point it was frequently attempted to conduct to the right or left what flowed to the rear of the stall, but this gutter was soon dammed by the solid excrement, and the urine was retained in it in pools, where it was well calculated to saturate the tails and clothing of the horses.

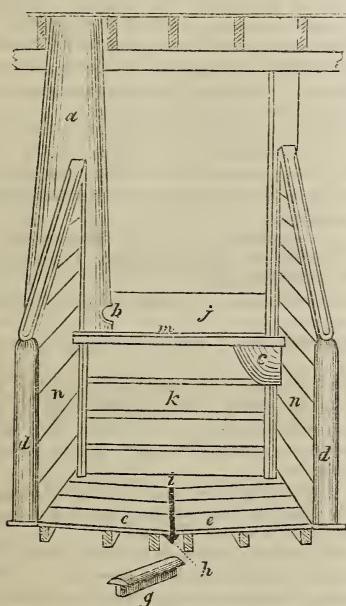
The urine falling about six feet from the rear of the stall, would, in flowing on the floor that distance, be obstructed by the bedding and manure, and would spread over the entire portion of the floor of the stall, and thoroughly saturate all the bedding with which it came in contact, thus forming what is claimed to be, a couch of "comfort," but those so claiming, have certainly peculiar ideas of comfort.

When we hear such a bed called "*comfortable*," it always reminds us of the Irish sheriff who was showing a friend from the country through the prison-yard, when the visitor asked the object of so many rings and staples in the beam of the gibbet, to which the sheriff replied "Why, to hang a number at one time" "How many can you hang there at once?" "Well, five or six hang there very *comfortably*." With about the same propriety, may it be said that animals lie comfortably, when they are compelled to lie on bed well saturated with liquid excrement. I long since concluded there was great need for improvement in stable

construction, and I decided, if possible, to invent some means by which the barbarous arrangement should no longer be tolerated. I tested various devices to accomplish my aim, but all were unsuccessful, until I, fortunately for the tortured animals, hit upon the mode of draining and feeding illustrated by the accompanying plates; and all my patrons have expressed themselves so superlatively in its praise, and having concluded that I cannot improve it, I decided to secure the right for the use of it, by letters patent.

The construction of the floor of the horse or cattle stall with inclination to the rear was condemned, and pronounced injurious to animals, more than a century since, by skilled veterinarians, yet none of them suggested a satisfactory substitute; hence horse and cattle stalls have been generally so constructed, until the introduction of my humane and improv'd arrangement.

Fig. 2.



Perspective Elevation of Stall, viewed from the rear.

Having seen a number of valuable horses which were ruined by what is called a *curb*; in the lower, and posterior portion of the hock, or gambrel joint, which unsoundness could be traced to no other cause than excessive stress on the back-tendons, by standing long on a floor having inclination to the rear, and knowing of knee and ankle-cocking, from the same cause and bad shoeing; and having noticed the habits of horses when free to select their favorite standing and lying site, and discovering that they evince a particular dislike to standing with the front feet on an elevation, and that when they lie, they invariably lie with the back up hill, or against the slope, even if it is very gentle; I decided to provide for these two instinctive preferences in the animal, and at the same time to secure in conjunction with the arrangement of the floor so as to have it level fore and aft, and to have a slant or slope from each side of the stall to the centre, a condition that the animal might lie either way and the back would be the highest.

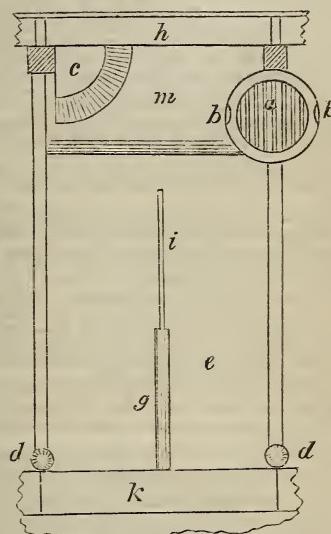
This I readily effected by my stall arrangement. Under the slot in the floor I place an iron gutter, 6 feet in length, V shaped, making the rear end of it 5 inches in depth and the other end but 1 1/2 inches in depth, thus giving a fall in the gutter of 3 1/2 inches in 6 feet, which enabled me to discharge the urine from each stall into a gutter under the floor in the rear of the stalls, by which I conveyed it immediately out of the building, discharging it in the manure-house instead of absorbing it by bedding, and compelling the animal to lie in it.

In the use of the stall floor, arranged after my plan, I find that the urine usually falls on, or near the slot, by

which it is taken out of the stable, and in case it chances to fall on either of the slot, and it spreads over a circular area of 18 inches diameter, it only has that distance to flow, ere it is beneath the floor, but ordinarily only 9 inches, instead of 6 feet, as in the use of the old stall, and over a heavy slope, instead of the gentle one, with which floor plank are usually laid, when made to slope to the rear. Thus I have secured the objects for which I aimed. I enable the horse to stand with comfort, to lie in a natural attitude, and remove the urine at once, so that the floor is dry, cleanly, healthful and comfortable. But I should enumerate other disadvantages arising from the common arrangement of stall floors, and the use of absorbent bedding, and making the stable a manure manufactory.

It is an axiom in chemical science, that volatile substances are most so under the influence of an elevated temperature; hence when the putrescent fluid in the bedding is warmed by the animal heat absorbed from the body of the animal while lying, its volatility is greatly increased, and to that degree that where a number of horses are kept in an unventilated, or imperfectly ventilated stable, when the door is opened in the morning, the air is so fetid, that man can scarcely endure it, and yet the helpless, pitiable animals have been tethered and compelled to endure this intolerable stench, perhaps for twelve hours. Innumerable cases of incurable blindness, and diseases of the lungs have occurred from this cause, and doubtless many more valuable animals are yet to be slaughtered by this barbarous, fatal system of stable management. O! that I had the right, I would open many a door to these fetid horse-dungeons, and give the poor victims of wanton ignorance fresh air, if I could not give them freedom.

Fig. 3.



Plan of Stall.

I congratulate myself on the encouraging fact, that I have, within the past two months, made plans for stables for one hundred and four animals, all of which are to have stalls arranged on my improved system, and that blessed free gift of fresh air, at a healthful temperature, is to be secured to all of them, and I hope to live to be the instrument of securing to thousands more, the precious, priceless boon, and to see the day that concert of action of the humanitarian element of society, will effect legislation, and enact laws, that will declare such cruelty to animals as I have described, which may truthfully be said to be the rule and not the exception, a state prison offence. Still another disadvantage of the old system, is the rapid destruction of floors of stables, by keeping them constantly charged with urine; and still another, that they are slippery and dangerous, which is almost entirely avoided in my system.

By the use of the close covered, iron Hay Tube, which I fill from the loft floor, I am enabled to avoid the very

objectionable feature of all stables otherwise arranged, of throwing the hay down into the stable, which covers the animals and all else in the stable with dust, wastes the hay, and greatly increases the labor of feeding. The horse dislikes that his hay should be exposed to the air, dust and stench of the stable, about as much as we do having our bread cut on Monday for a week's supply.

The common elevated hay-rack, and the box-manger, each have their objectionable features. In the use of the former, the breath of the animal is constantly forced into it, and in cold weather, the moisture of the breath condenses on it, so that all dust made in grooming and in cleaning the stable, that comes in contact with the hay, adheres, and is eaten by the horse, and it is fully exposed to all the fetid gases of the stable.

The latter is, if possible, still more objectionable, the hay being placed by the side of the grain-manger, and directly under the horse's nose; it receives all the mucous discharged from it, as also the food slattered in feeding, which is moistured with saliva, and the animal being unable to gather what falls on the hay, it works down to the bottom of the manger, where it accumulates, ferments, and decomposes, and breeds vermin, and eliminates offensive odors.

This condition of the box-manger, of which I have given an unexaggerated description, is very repulsive to our ideas of cleanliness, but much more so to the poor brute, who is compelled to eat from such a filthy manger, or starve.

In the use of my improved, close, iron hay-tube, through which there is no circulation of air, and no exposure of the hay to the objectionable features common to the others, no hay is wasted, and it is as safe, and as cleanly in it for any length of time, as it would be in the mow. The material being iron, it is durable and proof against the teeth of the horse.

The hinged iron manger has also the last named advantage of the hay tube, and it being hinged, may be removed and cleansed at pleasure, and the feed may be placed in it, without annoyance from the animal, in his eagerness to get the feed. The feed may also be prepared in the manger, and it may be buttoned out into the feeding passage, when it is most convenient to the groom; and at feeding-time it may be turned before the horse in an instant, thus always admitting of preparing it for, and allowing each animal by daylight, in which there is no little advantage.

I have never made a plan for a stable without a feeding-passage in front of the line of stalls, as I consider it indispensable.

I have become thoroughly convinced that there is neither economy to the owner, nor comfort to the animal, to be derived from the use of bedding of any description, for animals in properly constructed stalls. The stable is not the proper place for the manufacture of manure.

By my arrangement the urine removes itself, and the solid excrement should be removed as frequently as is practicable, and no absorbants should be used, except for the gases, for which purpose I prefer a slight dusting of gypsum to such portions of the floor as the excrement falls upon, as often as the stable is cleansed.

If no bedding is used and the stall is arranged on my improved plan, the floor will be dry, the animal cleanly, and the air sweet and pure; a condition very unlike that of the ordinary stable.

Plenty of pure air, and a comfortable temperature, being as essential, or more so, as plenty of good food, I will state that I am now ventilating my stables by an original method, by which I am able to prevent the possibility of a draft or current in the stable, and to maintain a temperature in it nearly uniform throughout the year. This I effect by bringing the air into the building through subterranean ducts, which are laid below the influence of both sun and frost; and yet I change the air perpetually, without the use of either power, or artificial heat. I hope the above will be useful to your readers, and that many horse owners will avail themselves of what I have wrought long and hard to perfect.

J. WILKINSON, Rural Architect,
Baltimore, Md.

AN APRIL VIOLET.

Under the Larch with its tassels wet,
While the early sunbeams lingered yet,
In the rosy dawn, my love I met.
Under the Larch, when the sun was set,
He came with an April violet;
Forty years—and I have it yet.
Out of Life with its fond regret,
What have Love and Memory yet?
Only an April violet.

Scribner's Monthly.

USEFUL RECIPES.

The following recipes are gleaned from "*A Treatise on the Horse*," by R. H. Parks, Physician, Surgeon, Farrier and Trainer—just published in Baltimore, and for sale at \$1:

PARKS'S LINIMENT FOR MAN OR BEAST.—For burns, bruises, rheumatism, inflammation, swelling, sprains, headache, toothache, chapped hands, spavins, ringbones, splints, sweeney, and one thousand other diseases. Take four ounces sulphuric ether, four ounces hartshorn, four ounces oil organum, four ounces alcohol, four ounces sweet oil. Shake well before using. For sprains, use a tight flannel bandage four inches wide. For headache, rub a little on the temples, and apply a piece of brown paper, wet with the liniment, to the forehead. For toothache, fill the tooth with cotton, wet with the liniment.

RECIPE FOR PARKS'S HOOF-SALVE.—Two pounds rosin, one pint linseed oil, one pint kerosene oil, two ounces of balsam of fir, two ounces of spirits of turpentine, two ounces of glycerine, two ounces of carbolic acid.

All except the rosin to be incorporated in a natural state; then melt the rosin and stir it in while it is hot.

This application should be applied with a brush or sponge, and it is an invaluable remedy for all cutaneous diseases of man or beast.

As a hoof application it excels all others known; it excludes both water and air, and promotes a vigorous, healthy growth of hoof and horn.

It has cured bad cases of piles when all other remedies have failed.

This remedy alone is worth many times the cost of this book.

PARKS'S CONDITION POWDERS.—Thoroughly mix the following ingredients in the proportions given; divide it into four equal doses, one to be given every six hours throughout the twenty-four hours, and to be continued during life:—

Two quarts of shelled corn, four quarts of chopped carrots, four quarts of clean oats, four quarts of linseed meal, and four quarts of unbolted rye meal.

Always feed while the horse is warm, if practicable; there is no danger of his being too warm when fed.

In cases of extreme debility, add to the above $\frac{1}{2}$ ounce of crude antimony, one ounce fenugreek seed (pulverized), one ounce flour of sulphur, and one ounce ground ginger, all well incorporated; divide into four equal doses, and mix a dose with each feed every other day.

Use none of the nostrums sold by horse medicine hucksters, called "Condition Powders;" they are generally worthless, and many of them are dangerous.

Liquid Blister.—Take one pint alcohol, $\frac{1}{2}$ pint turpentine, four ounces ammonia, four ounces oil organum, one ounce naphtha; apply this with sponge every three hours until you feel the skin thicken.

BLISTERING PASTE.—Take four ounces pulverized cantharides, two ounces turpentine, two ounces English rosin, two ounces beeswax; melt all together over a slow fire until dissolved; rub it on well with the fingers.

BLISTER FOR RINGBONE AND SPAVINS.—Take cantharides two ounces, mercurial ointment four ounces, tincture of iodine three ounces, turpentine four ounces, corrosive sublimate three drachms; mix all well with one pound of lard. After it has blistered well, dress it with Calomel Salve.

To REMOVE WARTS.—Pare the old skin until the wart bleeds, then apply a little caustic potash, which will kill the roots immediately. Oil well the following day.

SORE TONGUE.—Is relieved by washing well with strong alum water.

For the Maryland Farmer.

HORSE SHOEING.

The subject of shoeing horses, it would appear, from what has recently been developed in Baltimore, has hitherto been but very imperfectly understood.

The patent shoe with which Dr. Parks has been shoeing the lame horses of the City Passenger Railway, and a large number of both lame and sound horses for private gentlemen of the city and country, has wrought a complete revolution in the mode of shoeing and in the minds of horse owners and farriers on the subject.

It has been the universal practice hitherto, to confine the bearing of the foot upon the shoe to a very narrow belt under the edge of the wall of the hoof, leaving the sole and frog entirely without bearing.

All who have observed the natural condition of the unshod foot of the horse, know that the major portion of the foot, which is made the point of support in the old system of shoeing, is worn away by friction on the ground, and that the entire weight of the animal is thrown directly upon the sole and frog; hence they are the natural organs of support, and they are wonderfully adapted to the purpose.

It is really very strange that the foot of the horse should have endured such unnatural treatment and abuse, and maintained to the degree that it has, capacity for supporting and carrying the animal over pavements and other hard artificial roads. A considerable portion of the number of horses that have been kept shod for years have resisted the effects of the old system, and have been able to perform well, whilst a large number of others were unable to endure it but for a few years ere they required to have the shoes removed, and to be turned out to be recuperated. This course has been found, almost without an exception, to greatly relieve the animal that had become excessively lame and tender in the feet, and in a few months, by making the natural organs of support the means of it, the contracted heels have become expanded and new vigor given to the feet, so that the animals thus treated have been able to return to their labor for another season; but, as a natural consequence, the normal condition of the feet not being fully restored, they soon yielded again to the effect of the unnatural bearing. The effect has often been that the animal becomes worthless before he had reached that period at which he should have been most valuable; hence, in the aggregate, an incalculable loss to horse owners.

It is claimed by Dr. Parks, and I believe is generally endorsed by those who have examined the patent shoe and observed its effect, even upon

horses that were unable to work when it was applied, that feet shod with it will retain their natural form and healthful condition to a great age, and without losing the use of the animal for recuperation. I have had an opportunity to examine this patent shoe, and have observed the effect of it on a large number of horses which were lame and unfit for use when it was applied, and the beneficial effects of it have been so marked that I desire to call the attention of horse owners to it through the columns of the *Farmer*.

This shoe differs from the common shoe in these respects: It has an iron frog, which is slightly flexible in its attachment to the shoe, and is so placed that it affords direct support to the frog and sole.

An additional bearing for the sole is, however, provided by making the bearing surface for the foot on the shoe level, instead of "seating," or concaving it out, as are the shoes in the old system, and they are supplied with heel calks, so arranged as to most effectually prevent the very objectionable habit of "interfering."

In fitting the shoe to the foot, Dr. P. shortens the toe by removing the sole at the toe all that it will admit of; and maintains the full height of the heels; and opens the heels so that the foot can expand as often as the weight of the animal is thrown upon it, which has had the effect in cases that have come under my own observation, not only to relieve lameness from contraction, but has actually relieved bad cases of knee cock, and healed quarter cracks, and enabled horses that were useless and worthless to perform their regular daily work with comfort.

I look upon this discovery in farriery as one of great value to the country, and I hope that owners of horses will investigate it for themselves.

OBSERVER.

FENCE-POSTS—The following experience on the mooted question whether fence-posts will last longer when set in the same position in which they grew, or *vice versa*, is given by a writer: Some twenty-three or four years since, I set a fence inclosing house and door-yard—a rail and banister fence. The posts were sawed from good-sized, first growth, red chestnut logs. To saw them tapering, one half of them must be sawed to set in the ground top down, and the other half bottom down. The posts were set promiscuously, and to this day there has been no distinguishable difference in their lasting quality, unless it be where some of them had more sap on than others, and these gave out first, without regard to which end was set down.

Be silent when a fool talks; he will cease the sooner; you cannot gain by his converse.

ESSAY ON OSAGE HEDGING.

BY STILLMAN STOCKWELL, OF LYONS, IOWA.

How to Germinate Osage Seed.—Take a box, say 14 inches square, fill it with clean sand, take four quarts of Osage seed, put it into a small sack, place the sack in the middle of the box of sand, pour scalding water into the box until it is full; let the water stand in the box one hour, then draw it off from a hole in the bottom, place the box in a warm place; repeat the process twice every twenty-four hours, but not have the water hotter than you can bear your hand in after the first time; follow this process for three or four days; by that time (if good seed,) will begin to show sprouts, and time to plant. Plant your seed in drills 16 inches apart, one inch apart in the rows; cover $1\frac{1}{2}$ inches deep in fresh plowed ground, pack the dirt with a hoe or roller; cultivate as you would carrots, and if well cultivated will grow from two to three feet.

Take up the plants in the fall after they have done growing, put them in a cellar, or a hole dug in the ground, in layers so that the tops of one layer will cover the roots of the preceding layer, and so on until you have them all laid down, then cover the last layer by putting dirt upon it; if in a cellar see that they are packed close so that the roots shall not dry up. After corn planting is the best time for setting them; the buds on the live plants will have started, so it will be easy to tell the live from the dead ones.

Prepare your ground by plowing together six furrows, plowed at least ten inches deep and well pulverized with a harrow. The proper distance for setting the plants is six inches, in a straight line. A strong linen twine is the best line to set by; take a shingle or board that will measure twelve inches round, wind your twine around this so that it will cover the shingle one thickness, then take black paint or tar and rub on the edge of the shingle across the twine and when you draw out your line to set the plants by, you will have a black spot on the twine once in six inches. For setting the plants first cut off the tops to within one inch of the yellow root; take a piece of wood 18 inches long, chisel shaped at the lower end, one inch wide, place it on the end of the root and force it into the ground until the top of the plant comes almost level with the ground; in this way the roots will be driven straight into the ground, whereas, if set with a dibble, many of the roots will hit on the side of the hole or other obstruction and be curled up and die. After the plants are set go through the line set, with one foot on each side and thoroughly pack the ground around the plants; the young hedge should be kept clean of weeds and the ground stred often for the first season. Before winter sets in plow a deep furrow

on each side of the hedge, covering as much of the hedge as possible for a winter's protection.

Second Year.—Uncover the hedge carefully with a hoe as soon as the ground is well thawed out, but not to trim until it has got well to growing, then cut to within one inch of the ground; plow the ground on each side of the hedge and add one furrow on each side; cultivate as you would a row of corn through the season, and if justice is done to it will grow four feet high; this winter it will be able to stand without injury.

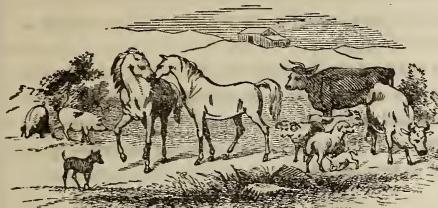
Third Year.—Cut to within two inches of the ground after it has got well to growing, and continue to cultivate well; this year it ought to have made a growth of six feet, and where it has done well will turn cattle; add two furrows to the width of cultivation.

Fourth Year.—Lop the hedge after it has got well to growing to within ten inches of the ground, by cutting each branch one half off, bending it down as close to the ground as possible by placing your foot upon it; will generally split up or down and lie in the right position, if not, fasten it down by twisting other branches around, or fasten it down with sticks, at any rate make it remain in a horizontal position, when each plant will throw up some half dozen shoots, and in this way you will have so thick a hedge that the smallest bird cannot go through it, and so close to the ground that nothing can get under it. The great failure of many in making hedges is they are afraid to cut it too close to the ground, and commence to make a hedge where they should leave off, viz: four or five feet from the ground. If justice has been done the hedge, it will this year make a growth sufficient to stop any ordinary stock, although horses or cattle might be driven through it, but rarely the second time. After this fourth year it should be sheared, sides and top, and not allowed to grow above five feet high, unless for a wind break.

Remarks.—The Osage Orange is a native of the tropics and grows to the size of 18 inches in diameter, therefore it has to be dwarfed to a shrub to make a hedge; any disposition of the plant to grow into a tree should be stopped by cutting down. Some say that the best way is to let the hedge grow until the third year, and then cut close to the ground, if that is the case there is no witchery in dwarfing trees. I think the better way is to cut in June until you have a perfect hedge, after that it will do to trim in the fall, but to trim a young hedge in the fall will ruin it. Those setting out hedges should always have spare plants of the same age as the hedge, to fill up all places killed in the winter, if a large plant is killed, fill the place with a large plant, never a small one.

The foregoing way of raising a hedge I have got by experience, and know if followed will be sure to make a live fence, that no kind of stock can pass, and the cost can not exceed 20 cents per rod; my fence has not cost me 15 cents per rod.

Livestock Register.



BREEDS AND THEIR CHARACTERISTICS.

In the United States, by far the most numerous of the different breeds of sheep, is the Merino. Their origin is quite ancient, and is shrouded in the uncertain twilight enveloping the history of the past centuries. For ages they were bred in Spain alone; but little more than a century ago found their way into Saxony and some other of the countries of Europe. Owing to a difference in climate and feed, and largely to the efforts of breeders, peculiar varieties have been established, such as the Silesian, Saxon, French, etc., though all still retaining the prominent characteristics of their Andalusian ancestry. Among these may be noted small size, compact bodies, fineness of fleece, hardiness and longevity; they are slow in maturing and when compared with some other breeds, deficient in prolificacy, and in nursing qualities. Their mutton is of good quality when well matured and fattened. The importations from Spain into this country have proved by far the most successful, and the Spanish standard has been so much improved upon that the variety now known as the American Merino is generally admitted superior to the best in Europe in form, hardiness, quantity of fleece, and quality of staple.

The LEICESTER of to-day is the breed established by Bakewell. They are sometimes called the New Leicester, though this distinction is not now necessary. The aim of Bakewell was to produce a sheep that would furnish the largest amount of meat in the shortest time on a given amount of food, and his efforts in that direction placed the Leicester for those peculiarities, in the front rank of the ovine race, a position it still holds. Their remarkable precocity was not attained, however, without sacrifices in some other directions; and they are only remunerative in the hands of the most prudent shepherds, requiring careful sheltering both Winter and Summer, and an abundance of rich food at all times.

COTSWOLDS are so called from a range of hills in Gloucestershire, long noted for the number and quality of the sheep maintained on them. The name is derived from *Cote*, a sheep-fold, and *Would*, a

naked hill. An old writer says of them: "In these woulds they feed in great numbers flocks of sheep, long-necked and square of bulk and bone, by reason (as is commonly thought,) of the weally and hilly situation of their pastures, whose wool, being most fine and soft, is held in passing great account amongst all nations." One would scarcely recognize in this description the ancestry of the improved Cotswold of to-day, the most popular of the large mutton sheep, carrying great weight and light offal.

SOUTH DOWNS.—For sixty miles through Sussex and Surrey, and some other counties in England, runs a chalky range of hills known as the South Downs, bordered by a tolerably fertile tract of land, well calculated for sheep walks. Before the days of the "Shepherd of Salisbury Plain," and ever since, the breed bearing the name of the hills near by have been here pastured. As in the case of all the other breeds, the earlier flocks possessed but few of the attractions of those of to-day. About ninety years ago, Mr John Eilman turned his attention to their improvement. It is understood that no foreign blood was introduced, but that the great improvement effected by him was secured mainly by strict attention to the principles of breeding, and skillful selections for coupling, through a series of fifty years. Health, good constitution, symmetry, early maturity, and facility of fattening, were the rewards of his lifelong perseverance. The meat of the South Down usually brings more per pound than that of other breeds—is of fine flavor, juicy, and well marbled. In size, this breed occupies a place intermediate between the Cotswold and Merino—though in exceptional cases they attain a weight of 200 to 250 pounds.

Many efforts have been made to establish a breed combining the fleece of the Merino with the carcass of the Cotswold, or some other long wool sheep, and as many failures have followed. If ever this idea is attained, our impression is that it will be through a skillful selection and cultivation of the Merino. Experience has demonstrated that they can be increased in size by high feed and prudent crossing—as witness the model American Merinos in the hands of some of our farmers of to-day, compared with the importations near the beginning of the century; and if there be those who think all the victories in this direction won, be it understood that we are neither of them, nor for them.—*Western Rural.*

ONIONS LICE EXTERMINATORS.—Asa Baldwin, of Chautauqua Co., N. Y., writes the *Rural New Yorker* that fifty years ago a very lousy cow of his ate ten or twelve onions, and in fifteen hours after, the lice had disappeared. He has tried the same remedy many times since, with the same result in each case

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Prof. Wm. P. Tonry, Robert Sinclair, B. W. Jones, Va. Geo. H. Mittnacht.

They Arrived Safely.—The trio of game chickens sent us by express from our friend, John A. Welch, of Lewisburg, Va., was received in good condition, and are now strutting majestically the lawns at "Ivy," and interfering somewhat with the quiet of the stately Brahmans and the tiny Bantams; but we have hopes of affiliation and "sweet concord" among them ere long. Our friend says:

"I will start your chickens by this mail, with feed to last. When you get low-spirited or feel languid, (if such things ever overcome you,) just call up the rooster and pitch him a grain of corn or two, and crack your thumb and finger to see him straighten up, I know you will be relieved. The pullet will show for herself. I think she is as pretty as a woman—but mind, without the top-knot on her head, like they wear here!"

THE HORSE.

"A Treatise on the Horse," by R. H. Parks, Physician, Surgeon, Farrier and Trainer, of Columbus, Ohio, has recently been published by Innes & Co., of this city.

We have received a copy of the work, and find it to contain much that is new and valuable to horse owners and breeders, and especially so to shoers or farriers, as it contains an illustrated description of Parks' system of shoeing with his improved patent shoe.

This shoe has, in the few weeks since it was first introduced here, been applied to the feet of hundreds of horses, which were suffering with contracted heels in various degrees, some being only slightly tender in the feet, others chronic, and so severe as to produce great lameness, and soreness extending to the shoulders, and producing what is generally called "chest founder," which, as well as knee and ankle cock, Dr. Parks claims are all concomitant with contraction of the heels. The article on "shoeing," occupying some forty pages of the work, is very explicit in explaining the causes of contraction, and in describing the most efficient means of preventing, as well as curing this common and serious malady.

The work also contains a number of valuable "recipes" for various diseases of the horse. It contains, besides the matter pertaining to farriery and the veterinary art, a very interesting essay, with illustrations, from the practical pen of our spirited contributor, Mr. J. Wilkinson, of Baltimore, on the construction of stables and stalls for horses, which Dr. Parks, in his comments on Mr. W.'s stable arrangements, says are superior to all others that he has found in this or any other country; and we are frank to confess that we were not aware before we examined the system by which Mr. W. constructs stables, that this branch of rural architecture had been reduced to a science.

Believing that we can give nothing to our numerous rural readers that will be more useful than this Essay on Stables, we have obtained permission to reproduce it in this No. of the *Farmer*, and we hope that it will be carefully read by all. The "Treatise on the Horse" may be obtained at the "*Farmer*" office, or it will be sent by mail to those ordering it, for one dollar, postage paid. It is a work of about 150 pages, and is plainly and prettily illustrated.

The First Premium for the best TIN-LINED LEAD PIPE was awarded by the American Institute Fair to the COLWELL'S SHAW & WILLARD M. F. G. Co., No. 213 Centre-st., New-York, Manufacturers of TIN-LINED LEAD PIPE, BLOCK TIN PIPE, LEAD PIPE, SHEET LEAD, SOLDER, etc. Orders solicited. TIN-LINED LEAD PIPE is 15 cents a pound, for all sizes. Warranted to be stronger than Lead Pipe of the same weight and size, and free from Lead or Zinc Poison or Iron Rust. Circular and sample of Pipe sent by mail free. Address as above.

For the Maryland Farmer.

HARD TIMES.

Who and what is Hard Times? and where does he live? Have any of our readers ever thought to solve this question for themselves? To my mind its honest solution will offer some valuable suggestions. Without a lengthy preliminary that we might easily run into, we will begin at once by assuming the following propositions:

- 1st. As to *who* it is. That it is SELF.
- 2d. As to *what* it is. That it is the *unnecessary indulgence of SELF*.
- 3d. As to *where* he lives. That he lives with *all* who feel his influence.

Can we sustain these propositions? Let us see. We will begin with the second head. If it can be shown that the unnecessary indulgence of self—the making of useless purchases, etc., is the author of Hard Times, then the first and third propositions hold proven as a matter of course.

Well, after good and wholesome food, warm and comfortable clothing, a neat and comfortable dwelling, with the necessary furniture and appliances to make it a pleasant and agreeable home, are provided for a family, most else that may then be had are superfluities—mere panderings to pride and a corrupted taste—and should be strenuously avoided by all not wishing to make the acquaintance of Hard Times. And just so far as unnecessary indulgences are made to supersede the *necessaries* of life, just to that extent will the cruel pinchings of Hard Times be felt. People make a great outcry about high taxation and costs of living, etc., and then sing the song ‘O, these Hard Times,’ when, if they would take the trouble to keep an honest debit and credit account of *necessaries* and *unnecessaries*, they might soon learn that they are both clothing and boarding Hard Times at their own expense, and are *themselves* accountable for all the wrongs that he has ever done them.

If a mechanic spends twenty-five cents a day for his drams, fifty cents a week for tobacco and segars, and three times as much for ice cream, mint juleps, lemonades, pies, and “good things;” if he pays fifty cents more for a “shu-fly” hat than any other good hat would cost him, a dollar additional for fancy top boots, an extra quarter for a sensational neck-tie, and afterwards makes an unwelcome acquaintance with Hard Times, we think he has no one to thank for it but self.

If that blooming widow over the way pays \$100 for a dress no more comfortable or becoming than one at \$15; if she must hide her own glossy curls under a horrible chignon at a cost of \$5; if she must replace the comfortable easy slipper at \$3 with fancy “pinch toes” at \$7; if she must put on \$1000

in various *etceteras* where not one cent is needed; if she must wear tight lacing and torture herself into a \$100 fee for the doctor; if she must wear false curls, and false bloom upon her cheeks; if she must do a hundred other things, all costing money, that nature, decency, and common sense never intended for her to do, we think, when her exchequer fails, she will have *very little room* to get in a rage about Hard Times.

If a farmer keeps two or three fast horses standing idle in his stable that ought to take their turn at the plow; if he keeps a fancy saddle, or a \$300 buggy merely to transport his ugly self once a month to the village fair, while he borrows a cart of his neighbor to haul his manure; if he spends 50 cents for candies, for a spoiled child, that ought to be expended in a spelling book for him; if he keeps a pack of half a dozen fox hounds when he ought to have a pen of Chester Whites; if he is off “sowing wild oats” when he should be at home sowing *tame* oats; if he does a hundred foolish and odd things, and goes to his pocket-book to pay for them, very likely when he wants to buy meat and bread for his family, or a new coat for himself, that all the *greeners* will be gone!—“gone where the woodbine twineth.” But if he finds himself in this predicament I wonder who is to be blamed but—self? He that doeth these things “*pays dear for his whistle.*” And the notes of that whistle are not half so sweet and pleasant to the ear—or the heart either—as are the whispering zephyrs that chant *Aolian* lays over barns, granaries, pantries, and *homes* filled with the *necessaries* of life.

In conclusion, then, we set it down as proven that *each man is the author of his own “Hard Times.”* That Hard Times is an imaginary personage having a living representative in all who forego the *necessaries* of life, and pander to a corrupt and vitiated taste by spending their money for that which satisfieth not. If people would come down to the actual comforts and necessities of life, and lay by their surplus gains, if any, not for Hard Times, but to make bright and cheery the period when the evening shadows fall athwart life’s pathway, then old, cruel hard hearted Hard Times would soon die, and the community might bury him, and place over his grave this epitaph :

HE LIVED BY
USELESS INDULGENCE OF SELF.
AND DIED BY
SELF DENIAL.

B. W. JONES.

Cottage Home, Surry, Va.

FROSTED FEET.—To relieve the intense itching of frosted feet dissolve a lump of alum in a little water, and bathe the part with it, warming it before the fire. One or two applications are sure to give relief.

For the Maryland Farmer.

FORCING MUSHROOMS.—No. 1.

Where the mushrooms are required all the year, they cannot be had without some degree of artificial heat, and therefore may come under the head of forced vegetables. The house in which mushrooms are grown may either be a detached building, or erected behind a viney, or other building, and of dimensions according to the quantity of mushrooms required. The walls should be fourteen inches in thickness, which would prevent, in a great measure, the sudden change of temperature inside the house, which is of great importance to the welfare of the mushroom. The house being constructed at any season of the year, collect a quantity of fresh horse dung that has not been exposed to wet or fermentation; clear it of long straws, so as to leave one-fourth in quantity of the shortest litter; when incorporated with the horse dropping, add a fourth part of tolerable dry turf mould, and mix it well with the dung; the advantage derived from the mould is the union of the whole into one compact, solid substance, so congenial to the growth of mushrooms.

This being procured in some quantity, proceed to make up the beds in the following manner: by placing a layer about three inches thick, of the prepared mixture, then, with a flat mallet beat it as closely together as possible; next, add another layer of the compost, repeating the same process as before, and so on, until the beds are formed into a solid body, nine inches thick, making the surface of the beds as smooth as possible. The reducing the beds into a very solid body, is a most essential point, for without it you cannot expect success, and the thickness of them must also be particularly attended to; for where there is a much greater body the beds will be subject to a strong fermentation, and will be prevented by evaporation from retaining that consistency in the dung which is absolutely necessary for the production of a good and plentiful crop. On the contrary, if a much less quantity be laid together the heat and fermentation will be insufficient to prepare the beds for the nourishment of the spawn, but the assistance of both to the extent prescribed, cements the material; which, in addition to the beating, increases greatly their solidity. The proper vegetation of the spawn, and the consequent crop of mushrooms, depends entirely upon a moderate general heat, and fermentation neither too strong nor too slight. As soon as the heat in the bed is a little more than eighty degrees, beat them a second time to render them more solid. But if the beds do not attain the heat required in four or five days after putting up, which may be known by plunging a thermometer into it, add another layer of the com-

post two inches thick, which will probably increase the heat sufficiently; if not, a part of the bed should be taken away and the remainder mixed with fresh horse droppings, and wrought together in the same manner as before, in order to produce the proper degree of heat. Beds made after this manner readily generate natural spawn in summer, and frequently in the winter months.

W. LINEKER.

SUGGESTIONS.

The Dorchester County *News* gives twelve reasons why real estate is on the decline on the Easternshore of Maryland. Among them are the following:

First—We have no immigration here to create competition, nor will we get it without making a proper effort to induce it.

Second—No inducement is offered to Northern capitalists to invest their surplus funds in manufacturing amongst us. If one desires a strip of land, whereon to build a factory, we ask him an enormous price for it, instead of giving it to him, which ought to be done.

Third—We are altogether too selfish, unfortunately viewing the new comers as interlopers who are dependent upon us, when, in reality, we are somewhat dependent upon them.

Fourth—The old aristocratic idea—that a man who toils is the inferior, and not the equal of the professional lounger—is still somewhat prevalent in this latitude.

Fifth—The ladies of our community, it has been avowed, are too reserved in their calls upon those of their own sex who are brought hither to reside, i. e., they do not extend the right kind of welcome to the wives and daughters of persons from the North who have bought lands and settled here.

Eight—We are always endeavoring to devise means whereby we can live without work, which is an impossibility. History proves that any people who abhor labor become beggars.

Ninth—We undertake to farm large estates when we have scarcely the means to farm small ones. We should only attempt to do what we are capable of doing.

It is our regret that there is a vast deal too much truth in these reasons ascribed to our stand still position. It is not only on the Easternshore, but it seriously effects almost all localities of our State. We are all the time uttering our complaints about labor and making a big fuss, in convention and otherwise, on the subject of immigration to our domain, when the fault is altogether with us. The action taken by us thus far establishes the fact that we have only looked for muscular recommendations in the class of immigrants we want. There is already too much idle muscle floating around in our communities. If it were pressed into service and compelled to do something in the way of work, the statistics of Maryland crops will be increased one-third in the year 1871, and Jones' Falls could be off the hands of the council, the "commission," and minds of the people in twelve months' time. What we want is men of enterprise, men of brains, of skill and energy. Our condition will not be much improved until we get them.—*Baltimore County Union.*

Grape Culture.

For the Maryland Farmer.

PLANTING CUTTINGS.

These should have been cut late in November, and put away in cellars, in moist sand, but will do if they have been cut later. Some make cuttings eighteen to twenty inches long. I like them best, of six or eight inches long, with not less than two buds. I cut them close up to the lower bud, and an inch above the upper bud, slanting from the bud. Select well ripened wood, and avoid that which is unripe or spongy. As soon as the soil gets warm, plow and subsoil your ground; draw furrows three feet apart, in which lay your cuttings, three inches apart. Fill up to a fourth of an inch above the upper bud, and mulch with leaves, short straw, chaff, or best of all, with spent tan bark. Keep the ground loose with cultivator and hoe; water in dry weather if necessary.

Planting Grape Roots.

Plow and subsoil the ground to the depth of about twenty inches. Cross-plow and subsoil to the same depth; have the ground as mellow as possible. Lay off the rows, eight feet apart, and set seven feet long stakes, eight feet apart in the rows for fast growing varieties, and six feet apart for slow growing sorts. Most writers recommend to set the roots on a small hill in the hole, and spread the roots in every direction. I have a hole dug six to eight inches deep, close to the stake, slanting ten to twelve inches downward, parallel with the rows. I set the plant close to the stake, spread out the roots, fill up with fine soil, and press down gently with the foot; then cut the vine back to two or three buds. The roots running all one way, I can cultivate close up to the rows, and the plowman can raise the cultivator slightly in cross-plowing, when passing over the roots. The second year I found the roots had taken possession of the ground in all directions. As soon as new shoots have grown three or four inches, I rub off all but one, the strongest. Keep this one tied to the stake as it grows longer; pinch the laterals or side shoots, after the first leaf, again after the second leaf, and so on after each new leaf. In the latter part of August, pinch off the leader, to ripen the lower buds.

Training Grape Vines.

The modes of training vines are very numerous, in this as well as in other countries. Some train them on stakes, others on trellises. In some parts of Europe they are grown from fifteen inches to two feet high, then cut back to the stump from year to year without any further care but to keep the soil mellow and free from weeds. In some parts of

Italy they raise the vines high up on trees. In this country, at the present time, grapes are mostly raised on trellises, instead of on stakes. Two systems are mostly followed, Fuller's arm system, and another erroneously called Hussman's system, for the latter has been in use for many years in Germany and other countries. I prefer the arm system, for it agrees more with our grape-vines in their wild state, which, no matter how high they climb on trees or on alders along the creeks, will not bear fruit until they reach the small branches of the trees, when they sag down and get into the shape of arms. Having raised the first year after planting the grape root, but one cane, I cut it down for the second year to about fifteen or eighteen inches. After the buds start, I rub off all but the two uppermost, and tie up and pinch back the two canes, exactly as I did the one cane the first year, but do not cut back the top or leader, until the shoots are four feet long, for strong growers, and three feet long for slow growers. Should a shoot not grow strong enough the first summer to be cut for two canes for the following season, it must be cut back again to two buds near the ground, and treated as those of the first year. If one or both canes do not grow strong enough the second year to be laid down as arms the third season, they must be cut down to one bud each, and treated precisely as those of the second year. But if healthy one year old roots have been planted, and the season was any ways favorable, almost all will be ready to be laid down the third year as arms, and many will bear a few bunches of grapes the second year.

Pruning and Training Vines the Third Year.

The trellis should now be ready to train the vines on them. I plant chestnut posts seven feet long, and five to six inches in diameter, split in two, sixteen feet apart in the rows and two feet into the ground, for vines planted eight feet apart. I nailed on them, strips, one inch thick by three inches wide, fifteen inches above the ground on hill sides and eighteen inches on level land. I tie one cane four feet long, raised the previous year, to the right and the other to the left on the strips; in the mean time I rail another tier of strips, about two and a half or three feet above the lower bar. When the young shoots make their appearance, select six of them on the upper side of the arm, as nearly eight inches apart as possible. Whenever there is a shoot left, intended for a cane, nail on a lathe to the strips, or stretch a wire from bar to bar; and tie the shoots to the lathe or wire as they grow up. Pinch the side shoots, after the first leaf, again, after the second leaf, and so on as recommended for the second year. When shoots have grown to about two and a half feet, pinch off the leader. If one shoot grows much faster than the others, check it, by pinching the lead-

er, if one should appear feeble and not make a good growth, do not check it at all, which will attract the sap from the others, and become a vigorous shoot. By this process, the sap is equally divided amongst the shoots. The third year you will have a partial bearing of fruit, say from three to five bunches of grapes on each shoot, shaded by large healthy leaves, which is very requisite to their ripening.

TRAINING THE FOURTH YEAR.

The shoots of the previous year, have since turned into canes. The fourth year cut each cane back to two buds. Two shoots the fourth year, instead of one the third year, must be tied up to one lathe or wire, the laterals pinched back after every new leaf, the leaders pinched when about two and a half feet high, and each treated exactly as they were the third year. The vines have now reached maturity and will generally bear from three to five bunches of grapes to each shoot, not unfrequently about seventy-two bunches or about thirty pounds of grapes to a healthy, thrifty vine, without injury to it.—Any one can easily see that the vine is not dwarfed, having twenty-four shoots, two and a half feet long each will give a growth of sixty feet to the vine.

G. H. MITTNACHT,
Lyal Park Vineyards, near Pikesville.

CULTURE OF BEANS.

Beans like a dry and rather light soil, though they will do well in any garden soil if not set out too early in the spring. Nothing is gained by planting until the ground is tolerably dry and warm.—The Dwarf varieties grow from twelve to eighteen inches in height, need no support, and are planted either in drills or hill. The drills should be not less than a foot apart, two inches deep, and the seed set in the drills from two to three inches apart.—The usual method in hills is to allow about half a dozen plants to a hill, and the hills two by three feet apart. Rows are best for the garden. A quart of ordinary sized beans is about fifteen hundred, and will sow two hundred and fifty feet of rows, or one hundred and fifty hills. Hoe well, but only when dry. Running beans are generally less hardy than the Dwarfs. The usual way of planting is in hills, about three feet apart, with the pole in the center of the hill. A very good way is to grow the running varieties in drills, using the tallest pea brush that can be secured conveniently. When the plants reach the top of the bush, pinch off the ends. The effect will be to cause greater fruitfulness below. In a stiff soil, especially, the Lima comes up better if planted carefully with the eye down.—*Vick's Guide.*

Look over our advertising pages carefully, you may find something of advantage to you.

Horticultural.

STRAWBERRIES IN ANNE ARUNDEL COUNTY.

Ike Bramble, writing from Idlewild, Broad Neck, Anne Arundel County, Md., thus discourses on the subject of strawberries, in the columns of the *Anne Arundel Advertiser*:

" You must excuse me for talking so much about fruit, but it is my way and I cannot help it. I delight in its cultivation, and I want to see my neighbors taking the same interest in it. Can we do anything better for ourselves? Is there anything that we can do better calculated to make our homesteads more pleasant and profitable to our children? Get them once interested in it to take hold themselves, and my word for it there will be to them, 'no place like home.' You would be surprised at the great rivalry among the strawberry growers. It is right that it should be so, it is a great point to have the earliest and choicest varieties. Without this rivalry the only aim would be to grow strawberries in such a manner and of such kinds as our grand-mothers cultivated. There are several varieties grown in this section. The old Stewart is still the standby of the hill-sides; the earliest variety we have. The Wilson Albany Seedling, comparatively a new berry, comes with us next in earliness; then the Agriculturist. Those three varieties are pretty much our standards, some others are grown on a small scale. The Albany Seedling seems to be in great favor, and I think very justly, for it has proven to be everything that is claimed for it. As a carrying berry it stands without a rival. The Agriculturist is also a favorite. With some it is the berry, not so prolific as the Albany Seedling, not quite so early, yet its size makes up the loss in numbers.—They run well from first to last picking, and I think they loose very little by distance of travel alongside of the Albany. These two last varieties require cultivation, I mean thorough cultivation. The early Stewart will take care of itself for awhile without much attention, not so with the Albany and Agriculturist; to be remunerative, they must be properly worked and fertilized, powder of bone dust, the best fertilizer for them. Perhaps enough has been said upon the strawberry for the present, at some future time I will give you our mode of cultivation."

THE frequent damage to trees by high winds and cattle will render the following directions for tree-surgery interesting to farmers: Let the broken limb be put into its place, and the torn and bruised bark be covered with clay and bound up, as in grafting. A correspondent of the *Cincinnati Gazette* reports the recovery of a cherry tree, broken by a horse. The writer supported the tree by tying it to a stake, and covered the broken place with grafting wax. The success was complete.

SILICA AND POTASH FOR FRUIT TREES.

Silica is pure sand, or rock crystal, in a soluble condition. Silex or silica and potash combined constitute the silicate of potash of which the sharp points of thistles are formed, and the prickers or stings of nettles. Silicate of potash forms also the harsh leaves of Indian corn, and the rough serrated edges of grass which will often cut tender fingers almost as readily as a knife. Some wheat straw is very harsh and stiff, rendered so by a coat of silicate of potash. Silica and potash are two of the most important ingredients that pomologists can employ for the production of any kind of smooth and perfect fruit. When the roots of a tree can be abundantly supplied with sand, or silica and potash, which will unite with the silica, and thus form a soluble silicate of potash the growing tree will employ it in large quantities to form a liquid and elastic glass for the surface of the leaves and fruit. Roots of plants often dissolve the very glassy covering of flower pots to get material to cover the leaves. There is an abundance of silicate of potash in some soils; but in other localities, potash must be supplied, or no fine fruit can be produced.

Doubtless, many of our readers have observed how smooth and fair fruit is which grows on a tree standing where there was once a charcoal pit, or when standing near a leach tub, where the roots had access to a liberal supply of alkali which had leached down into the ground from the ashes.—When trees are growing where there is an abundance of sand, or fine gravel, it is important to pile on wood-ashes for the purpose of producing silicic acid, which is an important ingredient in the soil when it is desirable to produce fine fruit of any kind. In addition to the substances alluded to, the flesh of animals, fish of any kind, the refuse and offal of slaughter-houses, leather shavings and all sorts of garbage from the kitchen, if buried around fruit-trees, will produce bountiful crops, provided noxious insects are not permitted to destroy the blossoms, or to sting they young fruit.—*Pomeroy's Democrat.*

RENOVATING OLD ORCHARDS.

Several modes are recommended how this can be successfully done; but we do not see how it can be more effectually done than by the one we have frequently recommended. That is to cut out all the dying wood, and three-fourths of the suckers, scrape the trunks of the trees completely, removing all the old, hard, broken bark; wash with a preparation of whale oil, soap and water, a pound of the soap to a bucket of water; and give the orchard, not merely under the trees, but every part of it, a heavy top-dressing of good barnyard manure. If there is

any life or productiveness left in the trees this will bring it out.

The suggestion that the trunks of the trees should be shorn of all the boughs and allowed to sucker, and some of these when large enough grafted, will prove a failure. The grafting of the ordinary suckers growing from the trunks of old trees can rarely be done with success. We tried this several times and the grafts all died at the end of the second or third year. Far better to graft the old trees whenever there is any *smooth-barked* wood near enough to a main bough. They will not only grow, but in most cases fruit the second year, and always the third year.—*Germantown Telegraph.*

PEAR BLIGHT—ANOTHER THEORY.

A correspondent of the *Rural New Yorker* says: "There may be something in my views relative to the necessity of pruning away all second or late autumn grown shoots on the pear or apple. Judging from many years of observation, I know there can be no harm in the practice, and I strongly believe there is benefit, if indeed, it be not in itself safeguard, in the prevention of one class of blight.

My view is that the late autumn growth never, or rarely fully ripens to perfection; and that the frosts of winter bursts and destroys more or less of the natural tissue and channels of circulation, leaving the sap poisoned by slow decay; and as soon as vegetation comes in spring, and the leaf is grown, so that a return of sap towards the root is formed, with that flows more or less poisonous sap, many times leaving traces on its way, that soon increase with warmth and circulation until they exhibit fully to the common observer in blackened branch and browned foliage."

TOMATO TRELLISES.

The cheapest and most convenient trellis for tomatoes is, to make a four-square frame for every hill, of four pieces of hard wood, two feet long and one inch square, for the four corner posts. Let three pieces of lath, each one a foot long, be nailed on each side. Such trellises will cost only a few cents each, and they will save four times their cost in the value of tomatoes. Let such a trellise be placed over each hill, before the plant has begun to bend sideways; then the fruit will all be kept off the ground. These kind of trellises may be made in the winter, or when laborers cannot work advantageously at some other employment. If made of durable timber, and carefully stored during winter in a pile on one side of the field, they will last half a score of years or more, especially if they were dipped in a kettle of hot coal tar, before they are to be placed over the tomato hills.—*Pomeroy's Dem.*

AGRICULTURAL CHEMISTRY.—VIII.

BY J. S. H. BARTLETT, M. D.

THE METHOD OF RENDERING MIXED SOILS PRODUCTIVE,
AND THE CONDITIONS NECESSARY THERETO.

Plants, as before observed, being immovable, it is not only necessary that their supplies of food should be furnished them, but that the supply should be in such a state as would admit of being readily absorbed by their small fibrous roots. In order that plants may derive the greatest benefit from the means of growth afforded them, it is also necessary that their nourishment should be supplied in proportion to their wants, that the decomposition which the greatest part of this food must undergo, should neither be too speedy nor too slow. The soil being the principal agent in producing these modifications, and being, as it were a magazine in which are deposited nearly all the aliments of plants, it ought to possess all the properties requisite for supplying the wants of vegetation.

The characteristics which belong to each one of the earths which constitute a soil, concur, by their union to produce this effect; lime and silica retain but little water, but their mixture with alumina (clay) preserves plants from suffering so often from drought. Clay, alone, does not permit the roots to extend themselves, nor allow the air to penetrate to them, but mixed with silica, lime, and sand, it forms a porous soil which possesses these properties. The composition of soils are modified in effect by the difference in climate. There are some countries where the atmosphere being almost always cloudy, the air is laden with moisture; there are others again, in which the sun is not obscured for six months at a time. It is evident that in those countries where the air is uniformly damp, and where rain is abundant, the soil may be without inconvenience more open or calcareous, than argillaceous or clayey, and the best soils would differ widely as to the proportions in which their several earths would need to be combined. Soils should be suitable to the nature of the plants it is proposed to raise on them, some preferring a dry porous soil, others again flourishing only in land that is constantly moist.

The art of agriculture is required, in order to know these peculiar tastes of plants; the chemistry of agriculture is required in order to know their inorganic constituents; so that the cultivator, by applying the appropriate manures, may derive in either case, the greatest result from his labor. In order that a plant may flourish in a soil, it is not always sufficient that the earths composing it are of the right kind, or suitably proportioned, it is necessary to unite other circumstances which are not always to be met with. For instance a soil which is underlaid with rock, will vary constantly in depth, which not only exercises an influence upon its powers of vegetation, but determines the kind of plant which can be grown upon it; grass and grain not requiring the same depth as would be necessary for trees, unless the rock was of a spongy or porous nature, or possessed crevices so as to permit the roots to penetrate them. If the substratum is sand or open gravel, the soil above will dry away too rapidly, and the rains in their rapid passage through it, will carry off the soluble salts and other fertilizing materials to too great an extent, thereby causing the necessity of more frequent manuring; an exam-

ple of such soil is seen in thousands of acres on the plain and bushlands of Long Island.

Again, a subsoil of clay under sand, contributes to its fertility by retaining the water, provided it is not of too compact a nature, but where it is of an impervious character, the water from stagnation around the roots of plants causes them to languish for the necessary supply of air, and as under such circumstances the water can only escape by evaporation, this cooling process abstracts from the soil the heat necessary for vegetation. Such a condition of things can only be remedied by the process of underdraining, whereby the water is carried off, and air and heat admitted to the soil. Large tracts of such land are found in that of New Jersey where the soil rests upon a blue-clay substratum.

The situation of a soil causes a variety in its fertility and the nature of its productions; lands which have a southern exposure dry more quickly than those lying towards the north; vegetation begins in them sooner and continues longer, is more active during the season, and the quality of their production is superior. The slope of lands likewise affects their fertility; a piece of ground which lies upon a declivity loses water more readily than one which is horizontal, the vegetation is less rank upon it, but the productions are of a better quality. In France they say there is a vast difference between wines made from the same kind of grape, raised in the same soil, if the one be the production of the vintage upon the declivity of a hill, and the other of the plain at its foot.

Soils composed of the same earthy principles, combined in the same proportions, will still present very different results, according to the nature and quantity of salts which they contain. Even those which must be considered as suited to vegetation, if too abundant, or very soluble in water, will be absorbed by the organs of plants in such quantity as to prove hurtful. The productiveness of a heavy soil is very materially increased by the thorough cultivation effected by thorough plowings at the right time, followed by harrowing and rolling, in order to accomplish the most minute sub-division of the land; for that portion which is lumpy exerts no influence on the crop, as so much of the soil is rendered useless for the season. By a minute subdivision, the soil is mechanically rendered permeable to the extension of the roots of plants, and chemically, is enabled to avail itself of the influence of the atmosphere, whose gases go so far towards the production of vegetable structure. Experience or a knowledge of the chemical nature of the sub-soil must guide the cultivator in the depth of his plowing, for if the surface soil is situated on a vein of earth, charged with black oxide of iron, or upon a bed of astringent clay or marl, the fact of bringing the same to the surface, would be likely to produce sterility for several years, or until such time as the effect of atmospheric influence, and the washing of the rains had changed the character of this substance—a dressing of lime also would be apt to shorten the time of unproductiveness.

We have witnessed this effect in our own farming operations when using certain clays upon sand to increase its body, as also in the use of some of the black marl of New Jersey, which cannot be profitably mixed with the soil without a previous exposure to a winter's frost, and the addition of certain amount of lime to neutralize any remaining excess of acid. Farmers are frequently subjected to loss from being unacquainted with the defects of soils,

and a want of knowing how to remedy them, and consequently, are often not sufficiently remunerated for the labor bestowed upon certain portion of their farms. Although our country is essentially an agricultural one, yet the farmer has several drawbacks to the profits of his business; the most important of those being the high price of labor, and he cannot afford to cultivate land at the present time which yields but a small return. If by knowing the requirements of the soil, and the necessities of crops, he can make without materially increasing the cost, one acre produce as much as two would under ordinary circumstances, (and it can be done) therein lies the secret for success in his calling. In this, as in all other matters, he will find that "knowledge is power," and that for his purpose the most important knowledge is that of agricultural chemistry.

THE MARYLAND STATE AGRICULTURAL AND MECHANICAL ASSOCIATION.

The regular quarterly meeting of the Executive Committee of the Maryland State Agricultural and Mechanical Association was held at their rooms, corner Lexington and Charles streets, on Tuesday, March 7th.

Business looking to an early issue of premium lists and appointment of judges was transacted.

The Secretary was directed to communicate with the Vice Presidents throughout the State, and request them to forward to the Executive Committee a list of names of those citizens and farmers in their respective counties who would be competent and willing to act as judges at the next annual Fair, so that exhibitors may be satisfied that a competent committee will be ready to pass upon every animal or article exhibited.

On motion, the Secretary, Mr. Trimble, was directed to issue to each stockholder and subscriber of \$100 and upwards, tickets of admission to the grounds of the Association.

CALVERT COUNTY AGRICULTURAL SOCIETY.—A meeting of this Society was held in the early part of March. A resolution was passed pledging the Society to co-operate as an auxiliary association with the International Immigrant Union of Baltimore. Hon. James T. Briscoe, Hon. James A. Bond and Dr. Wm. P. Dorsey were appointed a committee to consider and report at the next meeting some measure of reform tending to the promotion of the landed and renting interests of the county.

THE MARYLAND FARMER—We are receiving by every mail endorsements similar to the following from a correspondent at West Point, Va.:

I regard the "*Farmer*" as an invaluable acquisition to agricultural interests, and although I am not a farmer in extenso, I think it contains a great deal of useful information, worth vastly more than the subscription price. Continue it to my "home" address.

PREMIUM CORN CROP IN PENNSYLVANIA.

The Brandywine Farmers' Club of Chester County, Pennsylvania, has awarded to David H. Bronson of Guthrieville, the premium for the best four acres of Indian corn, his crop averaging 127 bushels and 33 pounds per acre. The height of the stalks varied from 13 to 16 feet, many measuring seven inches in circumference. In his statement to the club, Mr. Bronson said that last fall and spring he applied 100 wagon loads of unleached livery and barn-yard manure, broadcast, on 25 acres of clover and timothy sward, 50 loads of which were hauled a distance of three miles, all furrowed down in April and the first week in May. On the land on which the premium crop was grown, he applied, in addition to the stable manure, on the sod, three ox-cart loads of hogpen manure to the acre. After plowing and thoroughly pulverizing the soil, he marked out rows one way $3\frac{1}{2}$ feet apart, dropping the corn by hand, two grains, 15 to 18 inches apart, and applied to each hill a handful of hen manure, ashes, and plaster, of equal parts, covering with hoe May 10th. On 12 acres of the 25 cultivated, 500 bushels of lime were applied and cultivated in; the remaining 13 acres had previously been limed on the sod. In regard to the use of fertilizers Mr. Bronson remarked:

"Observation has taught me to believe that farmers who have almost abandoned the use of lime, and substituted many of the various so-called fertilizers, are impoverishing their lands, and have been deprived of their hard earnings, having been induced to purchase by the ingenuity of manufacturers, producing numerous testimonials of their magic results.

If we were entirely dependent upon the patent manures in the market, our land would in time become almost as barren as that of the great Sahara, and our children would be crying for bread. Twenty-five years back, Brandywine and her sister townships were illuminated almost nightly by the light from some lime-kilm in the neighborhood; to day we find them converted into ice-houses, and the trade entirely in the hands of the few who make it a special business. When we apply lime and barn-yard manure, we need no stakes to mark the result. Their application has long since ceased to be an experiment—the effects are evident. Raw-bone, beyond doubt, is an excellent fertilizer; yet its market value is such that the farmer cannot afford to apply it in quantities necessary for a permanent substitute for lime. An old horse, after having faithfully served the will of his master and paid the debt of nature, is more valuable, properly managed, than one ton of most of the fertilizers in the market. The deposits in the henry are valuable when mixed in equal parts with plaster, and applied to corn, or wheat, broadcast. Good shelter for our barn-yards is also one of the very best investments a farmer can make; manure exposed to the sun and drenching rains in the barn-yard is almost worthless, the substance of fertilizing properties having long since polluted some rivulet, and passed into the ocean."

Mr. Isaac L. Sahler, of West Brandywine, raised on one acre 131 bushels and 26 pounds of corn, allowing 70 pounds of ears to the bushel.

PACKING FOR MARKET.

The following directions for packing produce for market were furnished us by Messrs. Gillmore & Son, produce commission merchants, 194 W. Pratt street, Baltimore :

Packed Butter.—Chestnut, ash or oak tubs only should be used; never use *pine* covers—before putting the Butter in the packages soak them well in clear fresh water, then immediately in a clear strong *brine*, this keeps the package sweet and prevents the Butter sticking to the sides.

Roll Butter.—Should be well clothed in nice *white* muslin, which should have the *starch* thoroughly washed out in clear fresh water without using soap, and before being dried soaked in a clear strong brine before rolling up the Butter—never ship in packages with *pine* covers nor in *pine* packages as it impregnates the Butter with the *turpentine* flavor which greatly depreciates its value. Apple, sugar, salt or flour barrels sawed in two and thoroughly cleaned and soaked in fresh water, and after in brine, make good packages for shipping Roll—cleat on the tops securely with tin straps—never send “made over” Butter to this market.

Packing Eggs.—We recommend our shippers to send their Eggs in “Steven’s Patent Egg Carriers, a convenient package to lift, requires no counting, hold just 30 dozen and if carefully filled and handled cause no loss from breakage—these Carriers are sold at the low price of one dollar.

If packing in barrels, whether using wheat chaff, cut hay, cut straw or oats, let it be *dry, clean and sweet*, place three inches of the material at the bottom of the barrel then a layer of Eggs with the ends towards the sides, not touching the barrel by at least one inch, then place on them two inches of the material, press down gently with a follower, continue thus and as each layer is put in, press the material between the ends of the Eggs and the sides of the barrel, when the last layer of Eggs are in cover with at least two inches of the material and one inch of uncut hay, the cover should be pressed down closely and nailed, the hoops should all be nailed before commencing to pack and the ends inside the barrel broken off. Eggs packed thus and the barrels not rolled on the sides nor jammed in the cars but carefully handled, will go safely. Be sure that the Eggs have been carefully candled before packing and never send dirty or Pullet’s Eggs to market, the former lessens the value of the lot and the latter are not counted. We have all Eggs shipped to us examined and counted at our store, not leaving this to be done by the buyer as is done in some cases.

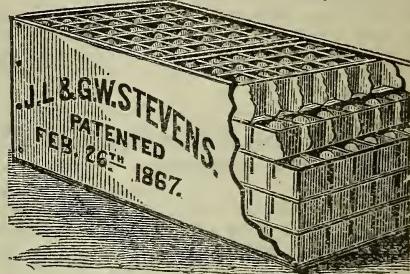
Poultry—Should be fat, killed by *bleeding* in the neck, *dry picked* and *drawn*, then put in cool place till thoroughly *cold*, use *dry* and clean packages, lining sides and ends with brown paper, pack closely so that the Poultry cannot move about, never use straw in packing as the dust hurts the appearance of the Poultry. Shipping from the west the Poultry had better be *undrawn* as the *drawn* from such long distances often sours; the undrawn keeps *sweet* much longer than the drawn; our quotations are for drawn. Half fattened, scalded, badly dressed, bruised and frozen Poultry does not sell well in this market.

Dried Fruits.—Sliced, quarters and halves should be carefully assorted, and the bright and dark separated; the difference in the price will pay for the labor; never false pack. The top should be the sample of all the fruit in the package; if it is not, when the mistake or fraud is found out, it is returned to the seller, or he has to suffer the damages. Fruit should be securely packed; weigh the package before packing, and mark the *tare* on the top, as it saves reclamation for light weight.

Packing Apples.—Use new barrels, take out the bottom heading and place two tiers of Apples on the top heading with stems downwards, then fill up, shaking frequently; when full, have apples slightly rounded up, put in the head and press down with a lever; mark the top heads so that when the barrel is opened, it will show a handsome face; place no bruised or decayed fruit in the barrels.—Onions should be packed in the same manner.

Onions.—Pack in the same as Apples.

STEVEN’S PATENT EGG CARRIER.



We present to our readers a cut of Steven’s Patent Egg Carrier, one of the great inventions of the day. All Shippers, Merchants, Grocers, and Farmers, who keep or handle Eggs should have them. The packages are light, convenient to handle, hold just 30 dozen, durable and well ventilated, and the Eggs not touching, never become heated, and keep much longer than those loose in Boxes or packed in Barrels. They require no counting, and children can pack them; besides, there is no loss from breakage in transportation. These Carriers are sold at the low price of one dollar each, by Gillmore & Son, Produce Commission Merchants, and sole agents for Patentee, 194 W. Pratt St., between Light and Charles, Baltimore.

Money in the Garden.—A Vegetable Manual, prepared with a view to Economy and Profit. By P. T. Quinn, Practical Horticulturist. New York: Tribune Association. We have received from the publishers a copy of this book, and can commend it for its plain practical discussions on gardening. In this work the author gives in plain practical style instructions on three distinct, although closely connected Branches of Gardening—The Kitchen Garden—Market Garden and Field Culture of Root Crops—the only credentials for the fitness of his undertaking being his successful, practical experience for a term of years. The author’s reputation is sufficient guarantee for the practical character of the work. The price of book is not stated.

John Saul’s Catalogue.—We acknowledge the receipt of Mr. Saul’s very elegant descriptive catalogue of new, rare and beautiful plants, Chrysanthemums, Geraniums, Fuchsias, Carnations, Verbenas, Phloxes, &c., for the spring of 1871, cultivated at his nurseries at Washington city, D. C. This catalogue comprises every variety of new and rare plants. Accompanying the catalogue is a beautiful chromo lithograph of Lady Edith—new Ivy-leaf Pelargoniums, and “Coleshill”—new Zonale Geranium, which are executed in a most artistic style. Send for a catalogue.

From Chas. P. Peters, Concordville Nurseries, Concordville, Delaware Co., Pa., Price List of Standard and Dwarf Fruit Trees, Evergreens, Shrubs, and small fruits.

For the Maryland Farmer.

MAKING COFFEE AND COOKING PEAS.

It is a proverbial fact that Americans, and the cooks of Great Britain, are the most indifferent coffee-makers in the world. There is scarcely any cooking done that requires so little skill as coffee making. It was the practice of my grandma, (now reaping her reward in heaven,) previous to employing a new cook, to test her skill in making coffee. If successful, she was invited to take off her bonnet and lay off her wrappings; on the contrary, a peremptory order was issued to vacate the Rinche. My practice of making coffee, as taught by my Grand Dam, is as follows: The first step, and one the most important, is parching. The pan or cylinder ought to be placed over a slow fire, and the coffee constantly agitated till the berries assume a uniform brown color; then put in a close vessel to hold the aroma. Some cooks parch coffee as they bake bread. True, they give a stir once or twice during the process, the result is half the berries are reduced to charcoal, and the remainder left in the original raw state. The next process is to grind the coffee tolerably fine; an ordinary size coffee-cup full of the parched berries is enough to mix with two quarts of water; pour the ground coffee in a quart bowl; crush an egg on it and add a scant pint of cream or new milk, stir till well mixed, pour the mixture in a clean coffee-pot, and on it two quarts of *boiling* water; have prepared previously, a slice of stale toasted bread, well charred; crumb it up and throw it in the pot, place on the cover, let the coffee have a lively boil for the space of eight minutes, not a moment longer, take off the pot, pour in a cup of cold water, which will check the boiling and prevent the escape of the all essential aroma. Let the coffee stand a few minutes to settle, then pour it into a gold, silver, or tin urn, as is your wont. The advantage gained by adding the yellow of an egg, toast, and boiling the milk—the same end may be attained by boiling the milk separately—with the coffee is, that it adds additional richness, and the coffee is rendered more nourishing. It is served up without being chilled with cold milk, an important consideration on a cold winter's morning. If these directions are followed out to the letter, you will have a nectar fit to offer to the Gods.

Some of our M. D.'s say that coffee is a poison; on the contrary, if properly made, it is nutritious, exhilarating and healthful. If carelessly parched and boiled to a jelly, the aroma extracted, it becomes tasteless slops—I was going to say, a poisonous drug. Coffee ought to be made neither too strong nor too weak, the beverage a lively brown color. In the absence of cream or milk, a teaspoonful of the yellow of an egg, stirred briskly in a cup of coffee, is equal to the usual quantity of cream added.

I have read that a beaten egg stirred and mixed with a pound of the berries while hot, will coat each berry, prevent the escape of the aroma, clear the coffee, and save the expence of upwards of half a dozen eggs.

COOKING PEAS.

I noticed an article in the last October or November numbers of the *New York Ledger*, written by the Rev. Henry Ward Beecher, on the subject of Fruits, Vegetables, and cooking Peas; principally devoted to the latter subject. Mr. B.'s effort when writing on minor subjects (his favorite theme of publication,) appear to be as carefully worded, and as graphically expressed, as are his eloquent theological efforts of composition. I give you his mode of cooking Peas, as near as I can recollect. Peculiar to himself he says, in substance: Pluck the Peas at dawn of day; put them in an ice-house, or a cool place. Peas plucked the previous day ought to be thrown to the pigs. Half an hour before dinner, hull them out nimbly, don't throw the Peas in water, there is enough contained in the cloister pod. If there are any speckled peas pick them out, but the least your warm palms touch them the better. Pour the peas in a stew-pan, and cover with *boiling* water, boil fifteen minutes; if the peas are large, twenty minutes, not a second longer; add a little salt and a lump of good butter, when melted serve up in a warm dish, which will contain neither peas nor butter, but in your ideal glory a delicious broth; dine early; we dine at twelve of the clock. In the summer dine on vegetables and fruits; in the winter meat, if you will. Let your food grow on roots, not on hoofs.

Then, Mr. B. alludes to the injurious effect of the American practice of excessive consumption of meats, which he contends are injurious to the system of man, both mentally and physically.

"We study these things too little as a nation, and as individuals." Mr. Beecher is hard on meat eaters, which is hardly fair, when alluding to states and localities where fish do not congregate. But in regard to the inner waters and coast of Maryland and Virginia, where such an abundance of shad, shell and other fish run and abound, with the addition of an abundant supply of vegetables and fruit, (the latter, probably equally productive of brains and beauty as the former are said to be, the residents of these States can well afford to abstain from excessive consumption of meat. Thereby endowing their sons with increased brains which the majority require, and their daughters with beauty, which they covet.

I cannot devise any better course, to encompass Mr. B.'s views, than to suggest to farmers to lay out extensive Vegetable Gardens, also an Orchard comprising principally Pear, Cherry, and Peach trees—with us apples do not pay to cultivate. Around the borders and centre of the Garden will be found good positions for setting out Berries and Grapes. As regards our citizens, they may profit by the suggestion,

PLOWMAN.

The florist.

FLORICULTURE---FOR APRIL.

PREPARED BY JOHN FEAST, Florist, Baltimore.

The spring has now fairly opened, and not much danger of more cold weather to injure out-door plants in general; except by sudden changes which are likely to occur. All planting should be finished as soon as possible, and every preparation made for the sowing of seeds by having the ground put in order; but we recommend the soil be dry before the seed are sown, as they seldom do well if put in when the soil is too wet. Now is a good time to separate all herbaceous, perennial plants, and plant out those of a hardy nature, that have been housed all winter. Uncover all plants that have been protected by a covering of straw, &c., and cut out all wood or dead branches, or cut down, if necessary; prune all training creepers, *Clematis* and others, and train them to trellises or verandahs in a proper manner. The renewal of the grounds in general, as walks, grass, and the replanting of box-edging of such as failed through the winter, require immediate attention.

The Greenhouse will not require as much attention now as in winter. All that is demanded is to keep the plants regularly watered—kept clean of insects—give plenty of air when the weather permits, and give plenty of room to those in bloom, by taking out some of those already flowered.

Bulbous Roots that have been out all winter, and protected by a covering, remove so that the flower stem may not be obstructed in coming up; tie up the stems, as they are very often injured and broke by the wind and rain when in blossom; they might be shaded, which would keep them longer in flower, as the sun soon destroys the beauty of the bloom.

Greenhouse Bulbs, as *Amyrillus*, *Lillies*, *Spanaris*, *Iris*, and many others that are beautiful, will begin to flower; they require to be kept near the glass to flower them strong; they should have a little shade, as the direct rays of the sun soon injures the bloom; give sufficient water when in flower.

Chrysanthemums may be propagated by dividing the roots, also from cuttings, to have strong plants for the autumn.

Stevias that are done flowering, should now be propagated by taking the young wood and putting in sand; keep close for a time, till they are rooted, then pot in small sized pots.

Heliotropes, and all the soft wooded plants, harden off by giving plenty of air, and if put in frames, protect from the cold, if the nights are not mild.

The Stove and Greenhouse Climbers should be attended to by cutting out the old wood so as to get a vigorous growth, and train them neatly to trellises or such supports as they require.

Cinerarias and *Caleolaria* will now be coming in flower. Keep them clean of insects, and if properly managed will give an abundance of bloom until the month of June.

Heaths, *Epacris*, and others of a hardy nature, should be kept cool. Repot and cut back such as are poor specimens, in order to make nice bushy plants, which makes them more desirable for flowering.

Fuchsias are showy plants, and if encouraged make an early bloom. Repot as they need more room, and pinch back the shoots in order to make pretty specimens.

Pelargoniums will now be budding; tie the shoots outward, so as to give them a spreading habit; by so doing they have numerous flower stems, which adds much more to plants in bloom, than when drawn up to two or three stems with a solitary flower on each stem. Keep them perfectly clean if a fine blossom is wanted, and give plenty of air at all times, if possible.

Achmenes, *Gloxinias*, and *Tydeas*, that have begun to grow should be potted off in separate pots; place three or four of the *Rhizomes* in each pot; the soil best suited is one part peat, one of leaf mould, and one-third of loam, with a little sand. Give good drainage, and keep in a close frame under a moist heat until grown strong enough to bear exposure.

Orchids, a beautiful tribe of plants—none more attractive in flowers—require a moist heat and a warm atmosphere. They will do in a common greenhouse, and but little care is required if properly treated, they flower at all seasons of the year, and are becoming the favorites of all who cultivate flowers. To grow them in pots or baskets and on bark, only requires moss mixed with some fibrous mixture of turf and leaf mould; they are differently cultivated, but in their native state generally grow on trees, though many are terrestrial, growing on the trunks of trees or rocks. The flowers are like in shape to a butterfly, and of the richest color. They number hundreds of varieties now cultivated, and held at high prices, surpassing any other generic of plants for their beauty.

Primula Auricula, or *Swiss Primrose*, a native of the Alps. Generally cold they are much cultivated in Europe for the edging of borders; they are quite hardy and but few plants surpass them in beauty; they are easy of cultivation, and are increased by a division of the roots like *Polyanthus*; easily raised from seed, and succeed well in this climate, requiring little care, and to be kept cool; shaded in summer, and protected in winter, avoiding dampness; flowering in the month of April in their native home, where they can be seen in bloom in over fifty varieties of every shade and hue; they should be in every collection.

Bedding out plants—as *Verbenas*, *Phloxes*, *Alliaria*, *Petunias*, and others.—Have a stock ready for planting out in time, next month. Keep them as hardy as possible; they will do better when planted, and are less liable to be injured by the change of atmosphere at this season of the year.

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SWEET POTATO CLIMBERS.—A lady florist says that a very pretty house vine is the sweet potato plant. Put a tuber in pure sand or sandy loam, in a hanging basket, and water occasionally. It will throw out tendrils and beautiful leaves, and will climb freely over the arms of the basket and upward toward the top of the window. Not one visitor in a hundred will know it, but will suppose it to be some rare foreign plant.

Take advantage of modern facilities, and accomplish as much in a single day as required weeks, months, or years formerly.

The Poultry House.

EARLY CHICKENS.

The season of the year has now fully arrived when breeders ought to have their stock mated and placed in their breeding pen, and whenever a hen shows signs of incubation, no time should be lost in placing eggs under her. The early hatched chickens has many advantages over those of later birth ; it should be borne in mind that it is in early chickenhood the frame is made that will hereafter place it in the rank of the large birds of its breed. And although feeding has much to do in the production of size and maturity, other things being equal, the early chicken is sure to be the best. It behooves breeders, then, who wish to excel in this respect, to produce early chickens, although at the cost of considerably more care and attention than is necessary in the raising of those at a latter period in the season.—*Poultry Chronicle.*

POULTRY KEEPING.

The deficiency of our own poultry supply mainly arises from a want of systematic enterprise. Many people "go in" for fancy poultry, and even for ordinary descriptions, with an eye to prizes at a poultry show. Farmers' wives and daughters have the poultry for pin money ; and hundreds of people "keep fowls," utterly ignoring the consideration that fowls might be made to keep them. But as to poultry keeping on a large scale, with an eye to meeting an ever-increasing demand, this is quite an exceptional state of things. Fowls—using the word generally—should receive attention like sheep or pigs, or even more, for they are more delicate and susceptible to diseases ; but many of them are preventable and the result of bad management or of no management at all.—*Food Journal.*

CHICKEN CHOLERA.—As the epidemic known by this name is now "in season," I would say, after trying various remedies for several years, that a strong decoction of red or black oak bark is the most reliable one within my knowledge. Given in time it is an effectual preventive, and in many cases will actually cure. It may be mixed with feed or given as a drink. The absurd device of pulling off the scale which naturally grows at the tip of the tongue in all fowls, to aid in securing their food, which has been recommended, is too preposterously silly to be worth serious notice.—*Country Gentle.*

PIP IN CHICKENS.—Feed your chickens raw, fine cut onions, once in three or four days—that will prevent pip. Also color their drinking water with tincture of iron occasionally. Bread soaked in vinegar is healthy. Get all the egg shells you can for your fowls, keep the hen-house clean, and give plenty of range during the day.

The Dairy.

PROPER TIME TO SKIM MILK.

The milk should be skimmed as soon as all the cream has risen, and before the milk has thickened. The exact time required for the cream to rise, will of course depend upon the temperature, but a little experience will enable one to tell. At the time the cream should be removed, it will have a bright, healthy appearance—a rich, yellow, uniform, and such adhesency of particles as will enable one sometimes to remove the entire cream at one dip of the skimmer.

If allowed to stand too long without skimming, both the quantity and the quality of the cream will be seriously affected ; the surface will become discolored, blotched and knobby, while underneath, the cream is rapidly yielding to the corrosive tendency of the acid in the milk. The thickest cream may be as surely destroyed by standing on the milk, as would the finest fabric in a bath of sulphuric acid. When thus destroyed, the cream is replaced by a thin, watery substance, having no resemblance to milk or cream.

Those facts, which may be easily verified, show how essential it is that the cream should be taken off before the milk has acquired any great amount of acidity. Yet, in order to make the largest quantity of butter, care must be taken not to remove the cream too soon. Many neat and thrifty housewives make a practice of "skimming up" the milk at stated intervals, so as to be through with the job. This is of course, very pleasant, but it involves considerable loss, as they do not get the full cream from the newest milk. The milk should all be skimmed at the same age, provide it has had the same conditions as regards temperature, etc. It follows, then, that some milk should be skimmed every night and morning.—*North Western Farmer.*

BONE MEAL FOR Cows.—We have never known cattle which had a plentiful supply of bone meal to be attacked with murrain. Young and growing animals are very fond of it. Calves will gladly lap it from the hand. There is no danger in feeding it ; cows will eat what they require, and no more.—Those that do not need it will not touch it. Dairy-men would do well to feed this article to cows, since they are called upon to supply a considerable quantity in their milk and in the production of their young. There is a difference between milch cows and oxen in their appetite for bones. We have never seen or heard of an ox picking up and trying to chew a refuse bone, whilst with milch cows it was quite common.—*American Stock Journal.*

Ladies Department.

BINDING SHEAVES.

Hark! a lover binding sheaves
To his maiden sings;
Flutter, flutter go the leaves,
Larks drop their wings
Little brooks for all their mirth
Are not blithe as he.
“Give me, what the love is worth
That I give thee.
“Speech that cannot be forborne,
Tells the story through;
I sowed my love in with the corn,
And they both grew.
Count the world full wide of girth,
And bixey honey sweet,
But count the love of more worth
Laid at thy feet.
“Money’s worth is house and land,
Velvet coat and vest.
Work’s worth is bread in hand;
Ay, and sweet rest.
Wilt thou learn what love is worth?
Ah! she sits above,
Sighing, ‘Weigh me not with earth,
Love’s worth is love.’”

JEAN INGELOW.

For the Maryland Farmer.

HUNTING BERRIES.

A THRILLING INCIDENT.

Willie Ray was the only son of a poor, but highly respected widow, who lived in an humble cot on the outskirts of one of those extensive pine forests so common in eastern Virginia. Willie was an industrious and dutiful boy, beloved by all his companions, and much esteemed for his frank and upright conduct. Often during the summer months, when no better employment offered, Willie would busy himself in picking the fine, large, blue huckleberries, which grew so abundantly a mile or two from his mother's residence. The berry ground was an extensive plateau of alternate moor and forest, called in eastern Virginia a *pocoson*. These pocosons, besides a heavy growth of oak and pine, are usually covered with a dense mass of green briars and tangled undergrowth, with here and there moors, or ponds, which are clear of bushes, except around the borders where the huckleberry appears to enjoy its favorite habitat. These ponds are generally dry in summer; hence there is no difficulty in walking over them. These pocosons, take them all in all, are wild, weird localities, refused by the agriculturist, and fit haunts for deer, wildcats, and snakes.

On a summer afternoon in the latter part of June, Willie had gone, as usual, to the pocoson to pick his allotted quota of berries, which he designed taking the next day to the village market. He had been more than usually successful, and after all his baskets were filled, he had tarried awhile to satisfy his own berry loving propensity. In the meantime he had not observed, or the umbrageous forest had hid from view, the gathering storm in the west; but now the distant mutterings of the thunder warned him that no time was to be lost in making his way back to his home. Having wandered, in his search for berries, much farther into the forest than he had intended, he soon found that the storm would be upon him long before he could reach home. The first drops of rain were already falling, and finding a large hollow log, Willie concluded to crawl into the open end of it, far enough to shelter him from the rain. He thought that the rain would soon be over, and he would then make his way out of the forest. Willie's impromptu house, served the

purpose of sheltering him from the rain admirably, but it came near proving his grave also. An opening in the log in front of him disclosed to Willie that he had a companion as dangerous and deadly as the hideous Cobra. A huge rattlesnake displayed its slimy coils to the horror-struck boy! The rage of the elements without, the thunder's crashing peals, and lightning's flash, were enough to have appalled older hearts; but now to be cooped up with a deadly rattlesnake darting its forked tongue within less than a yard of his face!—no wonder the poor boy was palsied, and rendered incapable of extricating himself from his perilous situation. Willie felt its subtle gaze fixed upon him,—felt that he was charmed, with no power to break the fascination! Every moment the serpent's influence was growing stronger, he was more and more completely mastering his victim, his coils were enlarging, and his fiery, venomous tongue was drawing nearer and nearer to the helpless boy! Another moment and he is near enough to strike, and the hideous reptile is about to fix deep his poison fangs in the very cheeks of the widow's only earthly stay and comfort! But—thanks be to that God who never forsakes His children in their hour of greatest peril—just at that moment a large limb, severed by the wind from its parent tree, fell immediately across the log. It frightened and broke the serpent's charm, which, uncoiling itself, passed quietly down over Willie's back out of the log. The poor boy, more dead than alive at the shock his system had sustained, after a fervent prayer of thankfulness for his remarkable deliverance, hastened to leave his shelter, and lost no time in making the best of his way out of the gloomy old woods, to his home and the arms of his mother. The widow had been much distressed at her son's exposure to the storm; but oh! who can describe her feelings when she learned of the dreadful danger from which he had escaped. The shock to her was scarcely less severe than it had been to Willie. That night the lowly couple, poor in this world's goods, but rich in faith, around their little family altar, poured out their whole hearts in gratitude to Him who holdeth and ordereth the lives of all His subjects. That night the widow's cot was a sanctuary of prayer and praise, an El Bethel, from whence the incense of two grateful hearts ascended from earth to heaven. That night was Willie consecrated to the ministry of the gospel of Jesus; and now he is a man in the meridian of life, engaged in proclaiming the glad tidings of salvation, and warning others of that old Serpent whose bite is far more to be dreaded than is that of the terrible rattlesnake or fatal Cobra.

B. W. JONES.

Cottage Home, Surrey, Va.

Unwritten Heroism of Fashion-Ridden Women.

One thing must be conceded to women, namely, the *grit* to endure any amount of inconvenience, or even positive pain, for the sake of dress. Now men—what failings soever they may have, and time would fail me to enumerate them—always, to my knowledge, stop short of physical torture, when they must choose between that and “the fashion.” Catch them at it! The good fellows, loving their ease better than wives, houses, or lands, shake their heads with a most decided negative at tight boots, tight hats, tight gloves; and welcome flannel under-garments and gum shoes, though their proportions *may* be thereby increased. This much I will say for them. But women! I have seen them, pale about the mouth, trying bravely to walk on those absurd pegs of heels run under the middle of their feet, while every muscle and joint were crying out in vain for mercy. I have seen them shivering, with defiant blue noses in the frosty air, while they tried, in our January snows, to keep their throats warm with a—necklace! I've seen their fingers

looking like stuffed sausages, in gloves at least two or three sizes too small; and when it was impossible for them to bend one finger joint. I've seen them walk miles with a heavy water-proof cloak hanging over their arms, because that silk velvet suit must be worn, at all costs, and rain would ruin it. And now, just as every woman outside of a lunatic asylum ought to rejoice in emancipation from long skirts in the streets, fashion say they must be worn. And for one, I am heartily glad, when they are, to see a good quarter of a yard of mud embroidering these expensive silk and velvet trains; and, better yet, embroidering, as I know they must, their stockings and under skirts. As to catching cold, the world can spare such fools before they bring others into the world. So I don't wear mourning for them.

Now, do you suppose women like these care about "female suffrage"? No, sir. They prefer female suffering. It is well to break ground for the car of progress, but you can't hoist women like that into it against their will. You've got to begin upon the little girls. Stop their candy feeding, their hot pastry luncheons at school recess, their "children's parties from seven till eleven" at night; their unsuitable clothes at all times, if you want women who will ever have sense enough to know their rights from their wrongs, or breadth enough or philanthropy enough to care, when their own lives are easy, whether those of other women are hard or not. *That's the whole of it!* Give women healthy bodies and an intelligent education, and you'll have no need to be jogging their elbows in the direction of their "rights." They will walk up and take them, just as inevitably and just as naturally, as a man takes his wife after the marriage ceremony; and they won't care, any more than he either, what bystanders think about it.—FANNY FERN, in *New York Ledger*.

IMPORTANT REQUISITES IN A WIFE.

Mothers are in a great degree responsible for the wives their daughters make. If they do not train them early to take their share in household work—if they do not teach them to cook and superintend a household, to sew, mend and knit—there is the blame if they do not fulfill the duties they undertake, when they become wives and housekeepers. In every situation in life, high or low, this sort of knowledge is of the greatest advantage. If the husband is rich, the wife should know how to disburse his riches most advantageously; if he is poor, she should know how to make a little go a great way, and should have been taught that "many a little makes a mickle."

There is no necessity that the gaining of such information should interfere with either intellectual acquirements or elegant accomplishments. A well regulated mind can find plenty of time to attend to all these pursuits. When a girl is nine or ten years old, she should be obliged to take some regular share of the household duties upon her shoulders; and to feel responsible for the manner in which her part is performed, such as washing the cups and saucers; cleaning the silver, or arranging and dusting the parlor, and attending to her own mending. This should not be done occasionally and neglected whenever she does not feel in the mood of performing the task, but should be considered her special work, and its non-completion should receive rebuke and correction. When older, girls should begin to take turns in making bread, cakes, pies and puddings. Should learn *effectually*, and not stand by and see others do them, but learn to do the work practically. Many a husband's affairs have suffered sadly for want of these domestic accomplishments. The wife tries to learn, tries to do her duty, but her early education was sadly neglected, and she must always be the sufferer thereby. On the other hand, if a girl has been well taught in her youth, when she becomes a wife she understands fully the management of household concerns, and many a husband has been saved from ruin by his wife's knowledge of economy and good management.—DAISY EYEBRIGHT, in *Country Gentleman*.

DOMESTIC RECIPES.

How to Mix Mustard.—Mustard should be mixed with water that has been boiled and allowed to cool; hot water destroys its essential properties, and raw cold water might cause it to ferment. Put the mustard in a cup, with a small pinch of salt, and mix with it very gradually sufficient boiled water to make it drop from the spoon without being watery. Stir and mix well, and rub the lumps well down with the back of a spoon, as mustard properly mixed should be perfectly free from these. The mustard pot should not be more than half full, or rather less, if it will not be used for a day or two, as the mustard is so much better when fresh made.

To Make Good Vinegar.—One pint of strained honey and two gallons of soft water. Let it stand in a moderately warm place. In three weeks it will be excellent vinegar.

Apple Custard.—One pint of *good* stewed apples, a quarter pound of butter, half a pint of cream, three eggs, beaten light, sugar and grated nutmeg to taste. Mix the ingredients together, and bake in a puff-paste in a moderate stove.

Milk Pancakes.—Put four yolks and two whites of eggs into a pint of milk, and dredge in flour and you have a smooth light batter; add a teaspoonful of grated ginger and a glass of brandy. Well heat some fritters in your frying-pan, and fry your pancakes of a nice brown color. Drain them carefully from the fat, and serve with pounded and sieved sugar strewn over them. Garnish the dish with sliced lemon.

Apple Fritters.—Pare and core some fine large pippins, and cut them into round slices. Soak them in wine, sugar and nutmeg for two or three hours. Make a batter of four eggs, a tablespoonful of rose-water, one of wine, and one of milk; thicken with enough flour, stirred in by degrees, to make a batter; mix it two or three hours before it is wanted, that it may be light. Heat some butter in a frying-pan; dip each slice of apple separately in the batter, and fry them brown; sift powdered sugar, and grate nutmeg over them.

Blanc Mange.—Four or five tablespoonsfuls of corn starch, to a quart of milk; beat the starch thoroughly with two eggs, and add to the milk while boiling, with a little salt; boil a few minutes, stirring briskly; flavor with rose, lemon, or vanilla, and pour into a mould. Sweeten it while cooking, or pour over it a sauce, or some of the lemon cream.

Fine Floating Island.—The juice of two lemons, the whites of two eggs, three tablespoonfuls of currant jelly, and twenty medium-sized lumps of loaf-sugar; mix and beat these to a stiff froth. Put it into the middle of the dish, and dress it with sweetmeats. Just before it is to be served, pour cream enough in the dish to float it.

French Crust for Raised Pies.—To every pound of flour allow half a saltspoonful of salt, two eggs, third of a pint of water, six ounces of butter. Spread the flour, which should be sifted and thoroughly dry, on the paste board; make a hole in the centre, into which put the butter; work it lightly into the flour, and when quite fine, add the salt; work the whole into a smooth paste with the eggs (yolks and whites) and water, and make it very firm. Knead the paste well, and let it be rather stiff, that the sides of the pie may be easily raised, and that they do not afterwards tumble or shrink.

Piquante Sauce for Salads.—Two hard boiled yolks of eggs, two raw yolks of eggs, mashed smooth, with a tablespoonful each of cream and olive oil; add sufficient vinegar to make it pretty sharp.

Wood & Mann Steam Engine Co.—See advertisement of Steam Engine and Boilers, Circular Saw Mills, &c.

FERTILIZERS.

The following Fertilizers are offered to the Farmer and Planter for spring use. The houses advertising in the "Farmer," are all men of integrity and reliability; and all are selling this season at reduced prices:—

J. J. Turner & Co., 42 Pratt street, Baltimore, offer to the Farmer and the trade, their long established "Excelsior," No. 1 Peruvian Guano, and Soluble Phosphates—Ammoniated Bone Super-Phosphate—Dissolved Bones.

Dugdale & Girvin, 55 South street, offer Bone Manure, Magnum Bonum Soluble Phosphate, Meat and Bone Guanos, Ground Bone, &c.

Walton, Whann & Co., 57 S. Calvert street, E. G. Edwards, agent, offers Whann's Raw Bone Super-Phosphate, a fertilizer for all crops.

Charles L. Oudesluys, 55 S. Gay street, offers the "Persicator," or Concentrated Ashes, and Prussian Agricultural Salts of Potash.

E. Whitman & Sons, 145 West Pratt street, offer Andrew Coe's Super-Phosphate, Pure Ground Bone, Pure Bone Meal, Prepared Land Plaster, Peruvian Guano, Mexican and Navassa Guanos, Fine Ground South Carolina Bone Phosphate, Land Salt, Lime, Sulphuric Acid, and all kinds of fertilizing materials.

N. E. Berry, Bowly's Wharf, offers Poudrette and the "Fertilizer."

Baltimore City Fertilizing Manufacturing Company, offer Flour of Bone, Ground Bone, Fish Guano, Poudrette, Compound, &c. John A. Thompson, Treasurer.

R. W. L. Rasin & Co., 32 South street, offer Pure Ground Bone, Ammoniacal Matter, Pendleton's Guano Compound, Soluble Sea Island Guano, &c.

Joshua Horner, Chew street, offers unadulterated Bone Dust.

Moro Phillips, 95 South street, offers Super-Phosphate of Lime, and Pure Phuine.

Wm. Reynolds, 79 South street, offers Bower's Complete Manure, made from Super-Phosphate of Lime, Ammonia and Potash.

RECEIVED.

From A. B. Farquhar, York, Pa., his Illustrated Catalogue and Price List of the Pennsylvania Agricultural Works.

Proceedings of the Annual Convention of the South Carolina Agricultural and Mechanical Society, held in S. C., November 10th and 12th, 1870. Containing address of Gen. Johnson Hagood—Report on Manures, Domestic and Foreign—on Rice Culture—Cultivation of Ramie, and other valuable papers.

List of Premiums of the Second Grand State Fair of the Agricultural, Mechanical, and Blood Stock Association of Texas, to be held on Monday, May 22nd, 1871, and continued six days, on the State Fair Ground, Houston, Texas. Competition open to the world.

List of Premiums, &c., of the Fifth Grand State Fair of the Mechanics' and Agricultural Fair Association of Louisiana, to commence Saturday, April 8th, 1871, and continue nine days, at the ground of the Association, in the city of New Orleans.

The American Journal of Dental Science—A monthly magazine devoted to Dental Science. It is edited with great ability by F. J. S. Gorgas, M. D., D. D. S. Published in Baltimore by Snowden & Cowman, at \$2.50 per annum.

Herald of Health and Journal of Physical Culture—advocates a higher type of manhood, physical, intellectual and moral. This monthly deserves the patronage of the public. Published by Wood & Holbrook, New York, at \$2 per annum. It should be in every family.

Health and Home—A new monthly devoted to home and the home circle. The first number has a varied and inviting table of contents, which needs only to be seen in order to awaken attention. It is published by W. R. De Puy & Bro., New York, at \$1.50 a year.

New Advertisements.

R. Sinclair & Co.....	Agricultural Implements.
Thos. Norris & Son.....	Agricultural Implements, &c.
Grover & Baker.....	Sowing Machines.
Minard Harder.....	Horse Power, &c.
John A. Thompson.....	Flour of Bone, &c.
F. Sage.....	Vinegar.
Wheeler, Melick & Co.....	Horse Power.
Chas. G. Blatchley.....	Wood Pumps.
P. Blanchard's Sons.....	Blanchard Churn.
Chas. P. Peters.....	Concordville Nurseries.
N. E. Berry.....	Poudrette—Fertilizer.
Wm. Birnie.....	Sale of Ayrshire Cattle.
J. W. Goodspeed & Co.....	The Year of Battles.
John Feast.....	New and Rare Plants.
Charles L. Oudesluys.....	The "Persicator."
Dugdale & Girvin.....	Reliable Fertilizers.
E. Whitman & Sons.....	Coe's Super-Phosphate, &c.
Walton, Whann & Co.....	Raw Bone Super-Phosphate.
R. W. L. Rasin & Co.....	Ground Bone, &c.

Bear in Mind.

When disease has undermined the health, and the physical system has become prostrated a stimulant that will not only strengthen, but remove the cause, should be immediately resorted to. Mental distress is also a fruitful source of the breaking down of the constitution, and the ravages of this enemy to health are truly alarming. For all such maladies Hostetter's Stomach Bitters have been found unsurpassed. By acting directly upon the digestive organs, they remove the heavy, disagreeable feeling after eating, so often complained of by persons of a delicate temperament. As soon as digestion is restored, the patient finds his strength increasing, and his general health improved.

Thousands of persons certify that it may be relied on in all cases of weakness or nervous debility attendant upon sedentary habits. The generality of Bitters are so disagreeable to the taste that they are objectionable to a weak stomach. This is not the case with Hostetter's Bitters, which will be found mild and extremely pleasant. Balsamic plants, barks and roots contribute their restorative juices to render it soothing and strengthening. Its basis is the only pure stimulant which has ever been produced, containing no *fusil oil*, or any other deleterious element. The most careful and skillful chemists have analyzed the Bitters, and pronounce them harmless. This is scientific testimony; but the testimony of the hundreds of thousands who have experienced the preventive and curative effects of the GREAT VEGETABLE TONIC and ALTERATIVE of modern times is still more conclusive. In Fever and Ague, Dyspepsia, Nervous Complaints, Chronic Complaints and general debility it is as nearly infallible as anything in this fallible world can be.

Baltimore and Ohio Railroad Company.

We have received the forty-fourth Annual Report of the President and Directors to the Stockholders of the Baltimore and Ohio Railroad Company, for the year ending September 30th, 1870. It embraces the Report of the President Mr. Garrett—the Treasurer's Annual Statement—Transportation Department Report—Road Department Report—Machinery Department Report—and articles of agreement between the Baltimore and Ohio Railroad Company, and the Winchester and Strasburg Railroad Co. These reports give a full and detailed statement of the condition of every department of the Road.

THE MARYLAND FARMER.

Written for the *Banner of the South and Planters' Journal*, published at Augusta, Ga., Nov. 26, 1870.

AN EXPERIMENT WITH EIGHT DIFFERENT KINDS OF FERTILIZERS.

BY GEORGE C. DIXON, CAMERON, GA.

There are now in the market for sale about forty different kinds of Fertilizers. Each of these are supported by a long list of certificates from various planters, who testify that they have used them—some one and some another—but all bear witness to good results. No proprietor or agent is without his list of certificates to show that his particular Fertilizer is as good, if not better, than any other. Now, how are planters to know which is the best? Notwithstanding these long lists of certificates, we find some farmers, yea, too many, who find that by practical application, after giving them a fair trial, prove them to be worthless fertilizers (or so-called fertilizers) and come out in debt and denounce all guanos.

Now, if farmers would put themselves to a little trouble we can soon find out the standard or best fertilizers, but to ascertain this we should try different kinds of fertilizers, side by side, and *publish the results of these tests, giving to the farming community the method of application, mode of culture, and the character of the land planted.* Even if but one kind is used the result should be made public. Such a policy will enable the farmer to gain information, not only as to the best and most reliable fertilizer applicable to the different soils, but of the best method of application. If any particular fertilizer proves worthless, *publish it*, but state at the same time the character of the land and the methods of application and cultivation. By so doing, farmers will be able to judge as between the Fertilizer and the experimenter; and thus be enabled to decide between the various kinds of fertilizers; and what is more, to determine whether the manufacturer or manipulator is deteriorating his products by adulteration, to reap fraudulently a rich harvest of wealth, or is perfecting his manufacture year by year.

This year I have tried seven different kinds of fertilizers, side by side, viz:

1. Bradley's Super-Phosphate of Lime.
2. Whann's Raw Bone Super-Phosphate.
3. Wilcox, Gibbs & Co.'s Manipulated Super-Phosphate of Lime.
4. Patapsco Guano.
5. My own Compound.
6. Soluble Pacific Guano.
7. Mapes' Super-Phosphate of Lime.

The land was a very poor old field, clay near the surface. It was planted in cotton last year, but

"lay out" the year before. The rows were three feet three inches apart. I did not break the land "flush," but ran furrows between the old rows, with an eight inch shovel plow, made with two wings in order to leave the furrow well open. This shovel plow ran twice in the same furrow. Then I drilled the Guano in this furrow at the rate of 320 pounds to the acre, ran a No. 10 cast-iron plow (Yankee) about eight inches deep on each side, covering the Guano. This left a ridge on the old bed where the old cotton stalks stood, about 7 or 8 inches wide, which I "burst out" by running my two-winged shovel plow very deep. The land was planted April 10th and cultivated with the sweep-plow and hoe. The rows of this experimental field were one acre, or seventy yards long.

The following is the result. I picked from—

Row manured with Whann's Raw Bone Super-Phosphate 12 $\frac{3}{4}$ pounds.

Row manured with Patapsco Guano 9 $\frac{3}{4}$ pounds.

Row manured with my own compound 9 $\frac{3}{4}$ pounds.

Row manured with Soluble Pacific 9 $\frac{1}{4}$ pounds.

Row manured with Bradley's Super-Phosphate, 9 pounds.

Row manured with Wilcox, Gibbs & Co.'s Manipulated 9 pounds.

Row manured with Mapes's Super-Phosphate 6 $\frac{3}{4}$ pounds.

Row unmanured in any manner 2 $\frac{1}{4}$ pounds.

As before stated, the land was very poor as will be inferred by the yield of the unmanured row—2 $\frac{1}{4}$ pounds. As the rows were three feet three inches apart, there would be sixty-four rows to the acre. Now, as Whann's Raw Bone Super-Phosphate stands ahead in this experiment, let us make a calculation as to whether or not it would pay, and if it would pay, how much?

One row manured with Whann's Raw Bone Super-Phosphate gave a yield of 12 $\frac{3}{4}$ pounds. This multiplied by 64 (the number of rows to the acre, at the distance taken) gives 816 pounds per acre. The row without guano made 2 $\frac{1}{4}$ pounds, which, multiplied as before by 64, gives 144 pounds per acre. Deducting 144 from 816 leaves 672 pounds, as the net gain by the use of Whann's Raw Bone Super-Phosphate. This 672 pounds of seed cotton will make at least 200 pounds of lint, which at 15 cents per pound, will give thirty (30) dollars.—This sum is the gain per acre of an acre manured with Whann's Raw Bone Super-Phosphate over and above that which an unmanured acre would yield. But we must pay for the guano out of this \$30. The cost of this (including hauling, &c.,) was \$12.80; deducting this sum from \$30 leaves \$17.20, as the clear profit—the return for the use of Whann's Raw Bone Super-Phosphate.

THE MARYLAND FARMER.

But it must be borne in mind that we had 672 pounds of seed cotton after deducting the amount made upon the unmanured acre; and in reducing it to lint we threw off 472 pounds for the weight of seed. This will give us at least 18 $\frac{1}{2}$ bushels of cotton seed, which, at 20 cents per bushel, will give us the further sum of \$3.70. Adding this to the above sum of \$17.20 gives \$20.90 as the whole gained per acre by the use of Raw Bone Super-Phosphate. Besides this we may expect some gain in the crop of the succeeding year.

I will not be at the trouble now of making a like calculation as to all the different Fertilizers used in my experimental patch, as any one may do it as I have given the yield of the different kinds, the amount of yield without the use of fertilizers, and the number of acres to the row.

I feel confident that the Mapes repaid me, notwithstanding that it gave the smallest yield, and I consider it the poorest of the seven different fertilizers used. My motto is: Try all things; hold fast to that which is good. I used nothing but Whann's Raw Bone Super-Phosphate (I mean of commercial fertilizers) in my general crop this season: and I am so well pleased that I shall use it more freely in future. But at the same time *I expect to raise all the manure on my farm, and would recommend every farmer to do likewise.*

I used Whann's Raw Bone Super-Phosphate in different quantities per acre, and I found that where the largest quantity was applied, the result was most satisfactory—it paid the best. †

PEAR CULTURE.

There is a great deal said in regard to the mode and manner of pear culture. My experience is that it matters little what kind of soil or situation they are on so that they get the proper kind of treatment. Keep the ground well mulched, and water them with soapsuds and manure-water.

We seldom prune except to cut off the ends of the branches where they grow beyond their strength to support themselves. We have been able to show more good fruit for the number of trees than any other pear-grower I have ever yet seen.

We are able to perfect all the fruit. If the branches are likely to break, when overburdened, we prop them. My impression is there are some varieties will answer better in different localities.

We have a succession of some of the best fruit from the seventh month until the last of the first month of the following year.

We ripen in our cellar vault, having tables covered with sawdust about two or three inches deep, which absorbs the superabundant moisture, and prevents the fruit from wilting. You can also inspect the fruit without handling, which injures it. Sometimes we cover them with paper when they incline to wilt. This will also prevent them from getting moist in very damp weather.—*Cor. Germantown Telegraph.*

Rain Statistics.

Water is so universally present in the air that the influence of the moon upon the rain-fall, as on the sea, in the tides, may be watched with interest.—Mr. Glaisher asserts, after much long and patient investigation, that the ninth day of the moon is the most rainy of the whole twenty-eight, and that in the first and last weeks of the moon's age, the rainfall is less than the average. The records kept by Mr. Glaisher also indicate four o'clock in the afternoon as the rainiest hour in the day.

Home-Made Vinegar.

In a wooden keg of about 5 gallons capacity bore a half inch hole near the top of the head to serve as an air hole, and pour in 4 gallons of good vinegar and allow to stand 14 days until the wood is thoroughly impregnated. Then draw off three-quarters of a gallon of the vinegar and replace it with the same quantity of boiling water, to which three-quarters of a pound of pure brandy has been added, and allow it to work for three weeks, and draw off three-quarters of a gallon of vinegar and proceed as before; every three weeks abstracting vinegar and adding brandy and water. The manufactured vinegar can be stored in a suitable cask in the cellar. A small quantity of crude tartar and caramel will impart the taste and color of a true wine vinegar to the article.—*Journal of Applied Chemistry.*

How to Keep a Churn from Frothing Over.

Happening one day to visit the house of a friend who kept a cow and made butter, I there saw a simple method he used to overcome the great trouble of all butter makers using the old-fashioned upright churn, uiz: the overflow of the cream during the process of churning. His plan was as follows: Take the body of the churn and cut a groove around the inside of the mouth, about three inches from the top and three-eighths of an inch deep, and then remove half the thickness of the wood, making a shoulder all around; then take the cover and cut it to fit nicely inside, and you have now done away with all the old nuisances of cloths, tubs, pans, etc., heretofore required to save the cream that flowed over. Any man, almost, can do this, or the churn may be taken to a carpenter and treated for a few cents. Many an idea of less consequence than this is patented, but all may take this one for what I gave for it.—*Cor. in Scientific Amer.*

Use the means within your reach; there is something for everybody to do; and a place for every one who is willing to work.

 Book and Job Printing of every description executed at this office.

THE MARYLAND FARMER.

BALTIMORE MARKETS---April 1.

Prepared for the "Maryland Farmer" by **GILLMORE & SON**, Produce Commission Merchants,
194 W. Pratt st.

[Unless when otherwise specified the prices are wholesale.]

ASHES.—Pot \$6.75@7.25

APPLES.—\$4.00@4.50 per barrel.

BEESWAX.—28@30 cts. per lb.

BROOM CORN.—5@6 cts. per lb.

BUTTER.—Some few lots of new have arrived, and are selling at 32 cts. for choice. There is a large stock of low grades of Roll on the market, and very difficult to sell; we quote for Western packed, choice 30 cts., prime 25 cts., good 20 cts., common to fair, 10 to 15 cts.

COTTON.—Market dull, we quote:

Upland. Mobile.

Ordinary.....	10½ cents	11 cents
Good ordinary.....	12	12½
Low middling.....	13½	14
Middling.....	14½	15

COFFEE.—Prices firm. Ordinary to Prime Rio, from jobbers, range from 14 to 17 cts. Gold duty paid.

DRIED FRUITS.—Market very quiet. Apples, prime, sliced, per lb, 7 cts.; ditto, quarters, 5 cts. Peaches, prime, peeled 20 cts.; unpeeled halves, 13 cts.; unpeeled quarters, 10 cts. Cherries, prime, pitted, 20 cts. Blackberries, prime, 13 cts.

EGGS.—Receipts very heavy, and stock large. Fresh, near by County, selling at 17 cts; Western and Southern, 16 cts.

FERTILIZERS.—No change to note. We quote:

Peruvian Guano—gold.....	\$68	per ton of 2000 lbs.
Orrchilla and Rodonado.....	30	per ton "
Turner's Excelsior.....	60	per ton "
Turner's Ammo. S. Phos.....	50	per ton "
E. F. Coe's Ammo. S. Phos.....	55	per ton "
Ober's Phospho-Peruvian Guano	65	per ton "
Ober's Super-Phosphate of Lime..	55	per ton "
Soluble Pacific Guano.....	60	per ton "
Patapsco Guano.....	60	per ton "
Flour of Bone.....	60	per ton "
Andrew Coe's Super-phosphate.....	52	per ton "
Baugh's Raw Bone S. Phos.....	50	per ton "
Excellenza Cotton Fertilizer.....	55	per ton "
Excellenza Soluble Phosphate.....	56	per ton "
Excellenza Tobacco Fertilizer.....	60	per ton "
Meat and Bone Guano.....	40	per ton "
Magnum Bonum Soluble Phos...	52	per ton "
Ruth's "Challenge" Sol. Phos.....	60	per ton "
Zell's Raw Bone Phosphate.....	56	per ton "
Rhodes' do.....	50	per ton "
Mapes' do.....	60	per ton "
Bone Dust.....	45	per ton "
Horner's Bone Dust.....	45	per ton "
Dissolved Bones.....	60	per ton "
Baynes' Fertilizer.....	40	per ton "
"A A" Mexican Guano.....	30	per ton "
"A" do.....	30	per ton "
Moro Phillips' Super-Phosphate.....	56	per ton "
Whann's Raw Bone Super Phos.....	56	per ton "
Md. Fertilizing & Manufacturing Co's Ammoniated Super-Phos- phate }	.55	per ton
Fine Ground Bone Phosphates.....	.30	per ton @ 8.00
Plaster.....	\$2.25	per bbl.

FLOUR.—Market quiet; very little shipping demand; business confined to local trade.

City Mills Super.......... 5.50 @ 6.50

“ Extra..... 1.00 @ 8.00

“ Family..... 1.00 @ 11.09

Howard Street Super.......... 5.50 @ 6.00

“ Extra..... 6.25 @ 6.75

“ Family..... 7.50 @ 8.50

Western Super.......... 5.50 @ 6.00

“ Extra..... 6.25 @ 6.75

“ Family..... 7.25 @ 8.50

GRAIN.—Wheat, prices tend downward; prices range from \$1.35 to \$1.90 for red, and \$1.50 to \$2.00 for white. Corn, yellow, 78 to 80 cts.; white, 80 to 81 cts. Oats, fine at 60 to 64 cts. Rye, 90 to 95 per bu.

MILL FEED.—Brownstuff 21@23 cts.; Light Middlings 28@30 cts. and heavy 40@50 cts.

MOLASSES.—Prices steady; New Orleans, 65 to 70 cts.; Porto Rico, 35 to 60 cts. English Islands, 80@90 cts.; Muscavado 34@33 cts.

PROVISIONS.—Active market. Fine sugar cured hams 17½@18 cts.; Shoulders 9@9½ cts. and Sides 11@11½ cts.

POTATOES.—Early Rose, per barrel, \$7.00; Peach Blows, \$4.50; Dykeman, \$4.50.

POULTRY.—Active. Old fowl, \$6.50 to \$7.50 per doz.; turkeys, 14 to 16 cts. per pound; ducks, \$5.00 to \$5.50 per dozen.

RICE.—Carolina fair to prime, 8½ to 9 cts.

SALT.—Ground alum, \$1.70, and fine, \$2.35 per sack; Turk's Island, 50 cts. per bushel.

SEEDS.—Clover, dull at \$7.25; Timothy, scarce at \$7.00, and Flax \$1.90 per bu.

SUGAR.—Active and steady market. Grocery grades, N. C. and Porto Rico, 9½ to 10½ and Demerara 10 to 12 cts.

WHISKEY.—91 to 92 cts.

QF.—Blessed are they who seek relief from "Liver Complaint," "Billiousness," severe lingering Coughs and Bronchitis, by using Dr. Pierce's Alt. Ext. or Golden Medical Discovery, for they shall be happy in knowing that the cure is complete. \$1,000 reward is offered by the proprietor for a medicine that will equal it in the cure of all the diseases for which it is recommended. For constipation of the bowels and as a blood purifier it can not be equalled by anything ever offered by the medical faculty. Sold by druggists.

Dr. Sage's Catarrh Remedy cures the worst cases.

To Farmers and Planters.

REDUCTION IN PRICE

—OF—

“EXCELSIOR”

AND

Ammoniated Super-Phosphate.

The decline in Gold, and consequent reduction in cost of materials of which our fertilizers are composed, we are enabled to reduce the price of EXCELSIOR to \$60 and our AMMONIATED SUPER-PHOSPHATE to \$50 PER TON, and refer farmers and planters to our advertisements in this paper.

J. J. TURNER & CO.

Manufacturers,

42 W. PRATT ST., Baltimore, Md.

BALTIMORE, February 15, 1871.

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We have a limited supply of

St. LOUIS BONE FLOUR,

The particles of which are about the size of Timothy seed. We recommend this as something very superior.

We will send a sample, by mail, to any one desirous of seeing it, and think an examination will convince any one of its superiority over anything in the market.

Price \$4 per ton of 2000 pounds.

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THE MARYLAND FARMER.

THERE were SOLD in the YEAR 1870
8,841

OF
BLATCHLEY'S CUCUMBER

TRADE **B** MARK.

WOOD PUMPS,

Measuring 213,566 feet in length, or sufficient in the aggregate for

A WELL OVER 40 MILES DEEP,

Simple in Construction—Easy in Operation—Giving no Taste to the Water—Durable—Reliable and Cheap.

These Pumps are their own recommendation.

For sale by Dealers in Hardware and Agricultural Implements, Plumbers, Pump Makers, &c., throughout the country. Circulars, &c., furnished upon application by mail or otherwise.

Single Pumps forwarded to parties in towns where I have no agents upon receipt of the regular retail price.

In buying, be careful that your Pump bears my trademark as above, as I guarantee no other.

CHAS. G. BLATCHLEY, Manuf'r,
OFFICE AND WAREROOM,
624 & 626 Filbert St., Philadelphia.

ap-6t

“GET THE BEST.”

THE

BLANCHARD CHURN,

Is in every respect the best ever offered for sale. It is simple, cheap, durable. It Churns, Works and Salts without change of Dasher or touching the hands to the Butter. Five sizes made.

30,000

now in actual use. Sold by all dealers in really first-class Farm Machinery. For Churns, Agencies, Descriptive Circulars and Fifty Dollar Prize Butter Essay, address SOLE MANUFACTURERS,

PORTER BLANCHARD'S SONS, Concord, N. H.
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FOR SALE a one-third or one-half interest in a first class Nursery with or without an interest in the land, which covers 100 acres, located 11 miles from the City Hall, New York City. The business established in 1836, and offers unequalled facilities for trade. To the right man, who must be a thorough practical business man, an excellent opportunity is offered. No agents need apply. Address, with full name and address.

It A. M., Box 5620, P. O., New York.

NEW AND RARE PLANTS.

The subscriber offers for sale on the most liberal terms many new

HARDY EVERGREENS,

of unsurpassed beauty. Also, a large collection of HOT and GREENHOUSE PLANTS, selected while in Europe, and still quite rare here. Also, everything worthy of notice, with Cut Flowers, Bouquets and Plants for Decorations furnished on the lowest terms.

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P. S.—Having assumed the business of JOHN FEAST & SONS, it will hereafter be carried on in my own name. All orders will be punctually attended to for cash, or satisfactory reference.

jan-1t

JOHN FEAST.

Concordville Nurseries.

ESTABLISHED IN 1845.

50,000 PEACH TREES, orchard varieties, including the King of Peaches, acknowledged the best variety in cultivation—was awarded the first premium in Delaware and Pennsylvania—grown from natural seed and budded from young, thrifty bearing trees; they have made thrifty growth stocky, 4 to 6 feet high. 100,000 Apple, Pear, Cherry, Plum, Apricots, &c. An immense stock of Grapes, Raspberries, Blackberries, &c. Shade and Ornamental Trees, Osage Orange, &c., for sale in large or small quantities at the lowest cash rates, if ordered early. Trees packed and shipped in good order. Send for Catalogue. Address CHAS. P. PETERS, Concordville, Delaware County, Pa.

Also, a few bushels of the CONCORD POTATO, a seedling of the Mercer; produced 415 bushels per acre, at \$5 per bushel, by express; 4 lbs. \$1.50, by mail.

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GREAT AUCTION SALE of Choice Ayrshire Cattle. Being under the necessity of reducing my stock, I will sell at auction on Wednesday, the 19th day of April, at 2 o'clock P. M., from 30 to 40 head of *Pure breed Ayrshire Cattle*, Cows, Heifers and Bulls, a majority of which were bred with great care under my own eye. The sale will take place at my farm in the City of Springfield, Mass., about one mile north of the Railroad Depot. Catalogues sent on application. I. R. PAGE, Auctioneer. It WM. BIRNIE, Springfield, Mass.

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The great need of agriculture is POT-ASH, the use of Phosphates and Guano have only made this need more urgent. It is especially adapted for the

Peach Culture,

from which it takes its name. It is cheap, reliable and has proved successful. Is prepared under direction of that eminent practical agricultural chemist, Dr. David Stewart, and is excellent for Corn, Tobacco and Grain crops generally.

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FLOUR of BONE.

GROUND BONE.

Fertilizer,

Fish Guano,

Ammoniated Phosphate,

Refined Poudrette

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Warranted pure, and for sale by the BALTIMORE CITY FERTILIZING MANUFACTURING COMPANY, Office No. 4 WOOD STREET, Corn Exchange Building, where directions for use and testimonials of farmers can be had.

JNO. A. THOMPSON,

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POUDRETTE—\$25 per Ton.

Consisting of—667 lbs. Bone,
1333 " Nitrogenous matter,
in 2000 lbs.

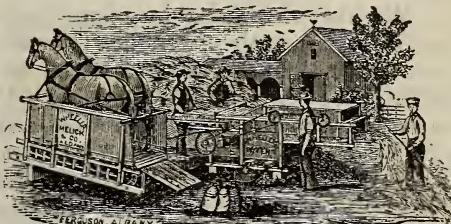
"FERTILIZER"—\$40 per Ton.

Consisting of—667 lbs. Bone,
666 " Meal,
667 " Poudrette,
in 2000 lbs.

These fertilizing compounds are made by the Baltimore City Fertilizing Company. A bonus of eighteen thousand dollars per annum is paid to the Company by the corporation of Baltimore city for receiving the dead animals, excrements, &c. Ten tons of excrement yield about one ton of the nitrogenous matter used in the manufacture of POUDRETTE. From the high character for integrity of the officers of this Company—from the well known character of the ingredients warranted by them to be used in these compounds, and from my own personal experience as a farmer in comparing them with other fertilizers upon crops of grain, tobacco, fruits and vegetables, I feel fully warranted in recommending these compounds to agriculturists, believing that there is no fertilizer manufactured which in comparison of cost with results will pay the farmer as well as the articles I hereby offer for sale.

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Agent for the Company,
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New York State Agricultural Works,

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PROPRIETORS, PATENTEES AND MANUFACTURERS OF
**RAILWAY CHAIN AND LEVER
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Combined Threshers and Winnowers, Overshot-Threshers, Clover-Hullers, Feed-Cutters, Saw-Mills, Horse rakes, Horse-Pitchforks, Shingle-Machines, &c. Albany, N.Y.
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VINEGAR, how made in 10 hours without drugs.
Particulars 10 cents. F. SAGE, Cromwell, Conn.
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EXCELSIOR REAPING AND MOWING MACHINE, WITH EITHER SELF RAKE or DROPPER.



Having been selling the Excelsior for the past four years, we are so thoroughly convinced of its excellence, having found it to give more universal satisfaction than any machine which we have ever sold, which includes nearly all the leading machines in the market, that we have no hesitation in recommending it as the **VERY BEST COMBINED MACHINE IN THE COUNTRY.**

We have shipped a large number of them South, into Georgia and the Carolinas, where they went into the hands of persons entirely unused to this class of machinery, and **HAVE NEVER YET HAD AN INSTANCE** where they failed to get them together properly and work them to their entire satisfaction. This can perhaps be appreciated, not only by dealers who have sent machines out and after considerable vexation had them returned at a considerable loss, but also by farmers who have at some time bought a complicated machine, and after great trouble in getting it together had perhaps some of the many pieces of machinery break just at the time when the machine was most needed.

There are two sizes of these machines, and we invite those in want of a good Reaper and Mower to call and examine "The Excelsior" before purchasing elsewhere.

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A capital advertising medium. Several thousand extra copies will be distributed at the various Southern Fairs in October and November.

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mar-2* JAMES J. H. GREGORY, Marblehead, Mass.

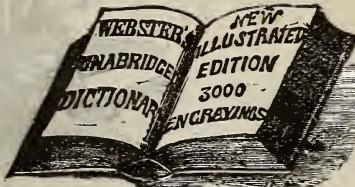
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Landscape Gardener,

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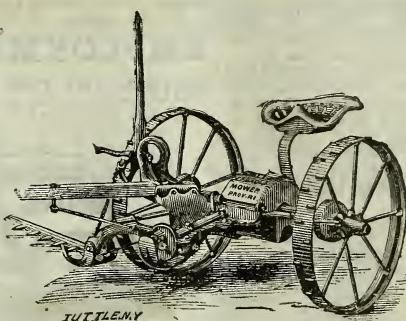
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PERFECTION!

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Its chief points of excellence are—

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Ease of Management, Durability.

It is the least liable to get out of order of any Machine in the market.

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Garden and Field Seeds of every description.

Our stock of GARDEN SEEDS is as large, fresh and genuine, and at as low prices, as that of any other first-class Seed House in the country. We will send

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Send for our SEED MANUAL, giving prices and much valuable information, which will be sent free upon application.

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Our stock is always complete, and our prices as low as those of any other reliable Seed House in the country.

Red Clover,
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Orchard Grass,
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Herds Grass, or Red Top,
Mixed Lawn Grass,
Sweet Scented Vernal Grass,
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Extra Clean Kentucky Blue Grass,
White Clover,
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Prince Edward Island Oats,
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Wheat (several varieties,)
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Early Goodrich Potato,
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THE MARYLAND FARMER.

A NEW BOOK.

CALDWELL'S TREATISE ON HEDGING.

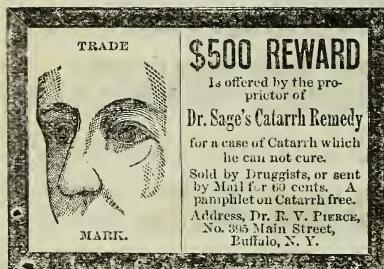
A HISTORY OF HEDGING, giving a complete theory of its culture. The nature of the osage orange as a hedge plant for different soils and climates—economy to farmers—farmer's accounts, giving the laws in regard to hedging in different States.

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Pure Blood Short Horn, (Durham,) Devon, Alderney and Ayrshire Calves, Merino, Southdown and Cotswold Sheep, Cashmere Goats, imported Suffolk, Essex, Berkshire and Sefton Pigs and all Choice Breeds of Poultry for sale.

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5000 to 10,000 Bushels Leached Ashes, for sale by

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COMPLETE MANURE,

MANUFACTURED BY
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WARRANTED FREE FROM ADULTERATION.

This manure contains all the elements to produce large crops of all kinds, and is highly recommended by all who used it, also by distinguished chemists who have, by analysis, tested its qualities.

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Aug-1f

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vines, Conover's Colossal
Asparagus.

Send for Price List, and address

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REDUCED PRICES:

5½ feet Self-Raking Reaper.....	\$145 00
6 " " " "	155 00
5½ " " " " with Mowing attachment.....	185 00
6 " " " " "	195 00
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TERMS.—A deduction of \$5 will be made on each Machine if cash is paid on delivery. Purchasers may be accommodated with time by giving satisfactory paper, with interest, payable at bank.
~~A supply of all kinds AGRICULTURAL IMPLEMENTS AND MACHINERY, FIELD AND GARDEN SEEDS constantly on hand.~~

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RAW BONE
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POINTS OF EXCELLENCE.

Beauty and Elasticity of Stitch.

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Using both threads directly from the spools.

No fastening of seams by hand, and no waste of thread.

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The seam retains its beauty and firmness after washing and ironing.

Besides doing all kinds of work done by other Sewing Machines, these Machines execute the most beautiful and permanent Embroidery and ornamental work.

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DRAINING AND IRRIGATING ENGINEER,
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He will give counsel in every branch of Agriculture, in which he has had a long and practical experience having been for eight years the proprietor and principal of an Agricultural School and Experimental Farm.

He would invite special attention to his plans of Farm Buildings, for which he received the highest prize ever awarded in this country; also, to his original modes of constructing underdrains and sewers, and of irrigation. He will furnish plans for heating buildings of any form or dimensions, and will ventilate any cellar, vault or apartment, modifying the ventilation to all circumstances, conditions and purposes, in all of which he guarantees satisfaction. References given if desired. Address

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Descriptive Catalogue of 100 varieties of
Garden and Field Seeds,
and 100 varieties of
Potatoes,
sent free to all. Address
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LIGHT, DURABLE AND LOW PRICED.

Fruit looks well, carries well and sells well in them.

Agents wanted in every fruit growing section.
Send for circulars to the General Agents.
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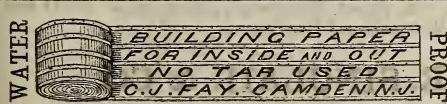
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Iron Ox Hurdle Fence, Iron Sheep Hurdle Fence, Wire Webbing for Sheep and Poultry Yards, Iron Farm Gates, Guards for Stable Divisions, Store Fronts, Factories, &c., Tree Guards, ORNAMENTAL WIRE WORK for Porches, Green Houses, &c.; WIRE RAILING for Cottage, Garden and Cemetery enclosures; Mosquito Netting and every variety of WIRE WORK. Every information furnished by manufacturers.

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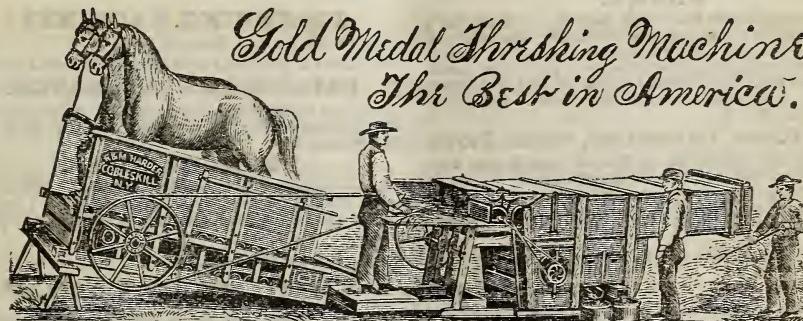
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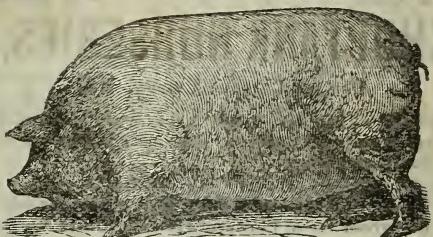
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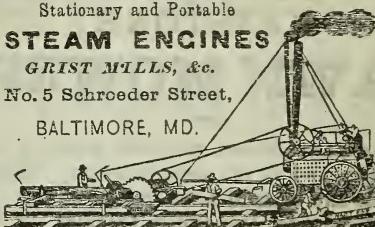
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